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DEMOGRAPHIC AND SOCIAL CONSEQUENCES OF OIL AND GAS
DEVELOPMENT IN SIBERIA, 1960s - EARLY 1990s

A
THESIS

Presented to the Faculty
of the University of Alaska Fairbanks
in Partial Fulfillment of the Requirements
for the Degree of

DOCTOR OF PHILOSOPHY

By
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Fairbanks, Alaska

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DEVELOPMENT IN SIBERIA, 1960s - EARLY 1990s

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ABSTRACT.

The main goal of this thesis is to study the demographic and social consequences of rapid oil and gas development in Siberia, to show the experience of solving or failing to solve of wide range of social and cultural issues, and to sum up the results of both the economic impact on the social-cultural processes and the social impact on industrial production.

In three decades, the number of new settlers in the Tyumen province was no less than 2,000,000 people. Such a pace of settling previously uninhabited territories with extreme environmental conditions had never occurred before in world practice.

This explosive growth of population, dominated by young single males, has resulted in a distorted demographic structure which is hardly capable of reproduction. The birth rate declined sharply, whereas the death rate grew because of accidents, diseases, alcoholism, narcotics addiction, etc. The situation has been aggravated by complete neglect of the development

of a social infrastructure. Nearly half of population live in conditions conducive to the degradation of family, morals, health and cultural values.

Oil and gas development had numerous negative effects on indigenous peoples of the North. Destruction of the environment has undermined the natural base and functioning of their traditional occupations. They were unable to adapt to the new kinds of economic activity, and social and physical problems have become aggravated. There has been growth of the disease rate and of alcoholism. The descent into poverty has been rapid, and they find themselves under threat of ethnic degeneration and extinction.

It was the initial orientation toward creation of a new but permanent population, the politics of «development through settlement,» that proved to be one of the main causes of the deep crisis which has affected the region. The formation of a large, heterogeneous, unstable population, taken together with all its problems, accompanied by the inability to

create a favorable social environment, mismanagement of manpower resources and an inadequate social infrastructure, have become the leading causes of production failures in the oil and gas industry.

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LIST OF ABBREVIATIONS

- TsGARF - Central State Archives of the Russian Federation
- TsGANKh - Central State Archives on the Economics of the Russian Federation
- GATO - State Archives of the Tyumen province
- AGTNG - Archives of the oil-producing enterprise Glavtyumenneftegaz
- AGTGP - Archives of the gas-producing enterprise Glastyumengasprom
- f. - number of the fund
- op. - number of the collection
- d. - volume number
- l. - page number

1. INTRODUCTION.

«What we anticipate seldom occurs; what we least expected generally happens,» wrote Benjamin Disraeli. I doubt if he meant Russia. However, it is hard to select a phrase more suitable to describe the present economic and social conditions in Russia.

A deep crisis has embraced the society from its economic basis to its cultural and spiritual spheres. The scale of the crisis confirms the fact that the previous socialist system has completely exhausted all resources for further development and thus has no future.

The truth of this statement is demonstrated by analysis of the present economic and social situation in Siberia and, in particular, in the Tyumen province, which for more than thirty years provided the USSR with the most valuable natural resources - oil and gas. Signs of crisis, typical for the whole country, are displayed there in their most acute forms because of the specific historic development of the Tyumen industrial complex.

1.1. HISTORICAL BACKGROUND.

1.1.1. THE IMPORTANCE OF OIL AND GAS DEVELOPMENT FOR THE FORMER USSR.

The discovery of oil deposits in the north of Western Siberia in 1959 opened a new stage in the development of Asiatic Russia. A vast territory, characterized by underdeveloped economies, became the scene of a concentration of investments aimed at forming the greatest oil-and-gas producing complex in the Soviet Union. Exploitation of oil and gas deposits began in 1964. During 1964-1990 more than 180 billion (bn) rubles of capital investments were poured into the region, and oil output increased from 204,000 tons a year in 1964 to 405,000,000 tons a year by 1988. By the beginning of the 1990s, Tyumen's deposits, the only ones known for the whole of Siberia, accounted for every fourth cubic meter of gas and every sixth ton of oil in the world. No other production program in the former USSR has exerted stronger influence on the Soviet economy, politics and ideology.

From the first stages, the entry of the oil-and-gas complex into the regional economy was burdened

with significant contradictions and accompanied by negative effects which will continue to be strongly felt for at least several decades in the future. The development of oil and gas resources was directed toward one goal: to increase at any price the output of hydrocarbons. The negative effects of a crash oil and gas program were not taken into consideration. The warnings of experts about the danger of repeating the drawbacks and disastrous results of previous economic practice, and about the probability of reproducing such results on an unprecedented scale in terms of capital and human costs, sounded like dissonance in a harmonious choir of initiators of an immediate all-out attack on and seizure of oil and gas resources.

The politics of this forced development were determined by two main factors. The first was to solve urgent problems of energy supply in the country's economy. The second was to export oil and gas to earn foreign currency, for which there was a desperate need to buy industrial equipment and food. These considerations resulted in the formation of a specific

ideology of oil and gas development. It was the ideology of rush work, of taking as much as possible as soon as possible, regardless of material and social costs. This ideology was guided by the well-known principle: «The aim justifies the means.»

Eventually, through huge expenditures of material and human resources the Tyumen province has been turned into the main fuel-energy base of the USSR, and has provided two-thirds of the country's hydro-carbon raw material production. The formation and rapid development of the Siberian oil-and-gas complex gave the Soviet leadership an excellent chance to address a wide range of issues which had challenged the USSR since the beginning of the 1960s.

What did Siberian oil mean for the former USSR? In the domestic sphere, there is reason to believe that the Siberian oil-and-gas complex was the only stabilizing factor in the maintenance of the Soviet industry and transport during the 1960s-1980s. Large-scale exports of Siberian hydrocarbons to the world market stimulated a great flow of «oil dollars» into the country. During 1970-1990 oil and gas sales alone

benefited the USSR with more than \$360 bn. It provided for a rather successful fulfilment of the Soviet social contracts and, indeed, created among the Soviet people the illusion of progressive movement of the so-called «developed socialism.» In this way, Siberian oil stabilized the existing political regime. Today, this illusion accounts for the apparent relative popularity of the Communist Party in Russia.

Soviet oil and gas subsidized the economies of the allies of the USSR in Eastern Europe and strengthened the military power of the Soviet Union and the Eastern bloc. As already mentioned, hydrocarbon raw materials were sold on the world market and constituted the USSR's largest single source of foreign currency. Oil and gas production to a considerable degree delayed the emergence of crisis signs in the socialist economy in both the USSR and Eastern Europe.

The above considerations help to explain how it was possible, even perhaps imperative, for the Soviet leadership to disregard any negative consequences of Siberian oil and gas development. Moscow leaders and their counterparts in Tyumen never could afford even

to imagine that other values could or should shape the development of the region. Oil and gas and the quantity of their production determined everything else.

At the same time, the USSR leadership's intention to increase the output of Siberian hydrocarbons at a breakneck speed led to a mammoth concentration of investments in the Tyumen province. These investments were derived through redistribution from other regions of the country and other industries, regardless of scientists' and experts' warnings of the disastrous effects of «oil intoxication.» Specifically, the immediate negative effect was the decay of agriculture and light industry, as import of food and consumer goods for «oil dollars» was deemed more attractive than investment in domestic production.

1.1.2. CRISIS SIGNS IN THE TYUMEN OIL DEVELOPMENT.

The powerful «oil lobby,» which formed in the highest ranks of the Soviet political and economic leadership in the beginning of the 1980s, opened a new thoughtless campaign to achieve a daily output in Tyumen of 1 million (mn) tons of oil and 1 bn cubic

meters of natural gas. The effects of such development were not long in coming, and not only in other economic domains. The industry itself was adversely affected. In the 1980s the Siberian oil and gas industry suffered a concealed crisis, i.e. the indicators in the main industrial branches (exploration, extraction, refinery, transportation, construction, etc.) were showing deterioration. In 1982-1983 the region failed to meet its target oil production for the first time. By a set of extraordinary measures, the previous level of output was restored and even surpassed in 1986-1988. But by the late 1980s, the collapse of the regional economy was at hand, and the crisis embraced all the structures of the oil-and-gas complex. The sharp decline in oil output, the exhaustion of many old deposits because of their barbarically rapid exploitation, the lag in the development of new ones, a high accident rate, the destruction of supply links, flaws in provision of equipment, failure in construction programs, etc., are by no means all of

the failures now plaguing the main oil-producing region of Russia.

It should be pointed out that, in general, the Soviet model of natural resource development always tended to follow the principle of their immediate capture and conquering. This rapacious ideology of economic behavior was typical of the whole country, but its negative consequences were most destructive in the North. Practice of mineral resource development in the Kola and Taimyr peninsulas, operation of the Bratsk-Ust-Ilim industrial complex, building of the hydropower system on the Angara and the Yenisei rivers, construction of the Baikal-Amur railway, the formation of Siberian diamond-extracting and gold-mining industries - all these economic programs vividly demonstrate the implementation of Soviet principles towards natural resource development.

The Tyumen oil-and-gas production complex is no exclusion in this dismal list. In keen pursuit of cheapness, oil and gas field development went in a rush. Wasteful destruction of the potential hydrocarbon resources went on. Forced development of

the most accessible and rich deposits, which set the dynamic growth of the production rate, created an illusion of overwhelming success. In reality, success turned out to be a time-bomb. Rushing of the production was not called for by economic necessity, it was sped up more for reasons of national prestige, by directives and guidelines which were far from sensible economic calculation. The series of decrees by the Communist Party and the Central Government, announcing with a flourish the creation of the Tyumen oil-and-gas production complex, set a high and absolutely unquestionable pace. The possibility of the slightest slowing-down was excluded, since it could be interpreted as testimony of an erroneous policy and inconsistency of the proclaimed course to creation of an oil-and-gas production region of world importance in Western Siberia.

No reference to circumstances could justify disruption in the fulfilment of directives; fulfilment and overfulfilment at any cost were normal. The specific technique of setting economic targets was applied in the practice of oil and gas resources

development in the North. The haste with which the production rate advanced were dazzling. Every effort was used to demonstrate the inexhaustible socialist economy potentialities in coping with the most difficult tasks, to take the wind out of the sceptical specialists in the country, and - even more - out of the foreign analysts and experts, who again and again expressed their doubt that the announced plans would ever be realized to the full.

In reality, disagreement, lack of agreement in implementing the development process stages, grave failures in material and technical procurement, limited transportation capacities and insufficient facilities for hydrocarbons primary processing, labor turnover and low-skilled labor force, underdeveloped social infrastructure and lack of means for its development were the main reasons bringing about the crisis that was quick to ensue.

Let us consider them in more detail. My choice of the Tyumen oil-and-gas production complex for analysis is determined by the role in pulling Russia out from the protracted period of economic crisis, as well as

by the fact that this complex had focused all the vices of the strategy and tactics assumed in developing the Russian North. Along with its own specific features, this «battle» for oil, with all its methods and results, is very similar to the «battles» for gold, nickel, diamonds, coal and other raw material resources of the North. The outcomes and the lessons of the Tyumen oil epic are an expression of the outcomes and lessons we took from the implementation of the Soviet model of development of the North.

The oil production crisis which befell Russia in the 1980s and 1990s is potentially able to deteriorate the conditions for the country's further socio-economic and political development for the years to come. The crisis happened gradually, and could not but burst out for a number of objective reasons.

The gap between escalation of the hydrocarbon production and the development of the technical base necessary for its support persisted. Over three decades the problems of creation of the equipment, machines, mechanisms and materials specifically

designed for operation in the North were not resolved. The oil processing production base, put in operation in the first decade of the oil field development, was initially imperfect and outdated, any renovation being done at times of emergencies or in case physical wear of the equipment was evident. The rich gushing oil fields on which the growing production rate relied, would sooner or later have brought about exhaustion of oil wells. The less abundant oil pools and fields were destroyed, instead of being preserved for their future use. The transportation system remained in a primitive state. The internal production site road system was mostly based on the use of all-road cross-country vehicles. Access to the country's railway network was limited to a single meridional line, Tyumen-Urengoi, whose construction was unforgivably delayed. The seasonal nature of cargo carriage on rivers and the North-East Arctic Passage necessitated creation of huge stores of material, fuel and food, immobilizing of the invested resources, and determined the work in the atmosphere of permanent risk.

Another group of reasons for the crisis in oil and gas production in the Tyumen North was defined by the stereotypes of the social policy and practices. Despite the persistent recommendations of scientists for creation in the northern regions of more advantageous housing, living and social conditions, their full-scale realization proved to be impossible. The traditional practice of setting foremost priority to fulfilment of production plans prevailed. The attempts to ensure preferable development of the social infrastructure failed. Housing construction grew, but this growth was not correlated with the labor force inflow, and disproportionate territorial allocation of capital investments in housing construction ensued. Urban and other settlement area development went according to temporary plans, minimum-level norms and maximum workload on available capacities. Development and build-up of production capacities of the local housing construction base went at an unforgivably slow pace.

One should be aware that at present the Siberian oil and gas complex remains one of the most important

guarantors of the economic stability of Russia during the present transition to a market economy. Failures in oil extraction shake the Russian economy from top to bottom, generating enormous social tensions. The degree of political and social tensions in the Tyumen province during the last 3-4 years has challenged the notion of the irreversibility of economic and political reforms in the country.

1.1.3. DEMOGRAPHIC AND SOCIAL CONSEQUENCES OF THE «FIGHT FOR OIL»: A GENERAL OBSERVATION.

The model of economic development described above could not but have negative effects on all components of the social potential of the Tyumen province. The demographic consequences of «the fight for oil» became especially acute. Regardless of numerous warnings of negative effects, the model «development through settlement» was chosen. This model was essentially distinct from those put into practice in other countries. The reasoning behind this choice was the recognition that the use of out-dated technology and equipment in oil production did not allow for utilization of the best Western patterns of northern

development. The only chance to meet production targets was to bring in as large a labor force as possible.

By means of a special system of financial incentives and an unprecedented campaign of political propaganda, the Soviet leaders pursued a policy of attracting hundreds of thousands of young and energetic people, predominantly single males, to relocate to Western Siberia. A number of middle-aged and older workers, hoping to accumulate money for the purchase of expensive goods (electronic equipment, cars, etc.), as well as for their retirement, also chose to move there together with their families. Low living standards in many regions of the country, especially in rural areas, also contributed to personal decisions to participate in «the fight for oil.»

While the authorities hoped to recruit skilled labor, this aim was not fully achieved. Alongside skilled workers, a great number of unskilled people became involved in the migration, as well as members of the socially marginal and criminal strata.

Nevertheless, mass migration was encouraged. Catastrophic consequences of this «great re-settlement» were unprecedented.

In three decades, the population in the Tyumen province tripled from 1,092,000 to 3,172,000. The greatest growth took place in the northern autonomous districts of the province, where the main oil and gas deposits are located. Seventeen new cities, some over 250,000 population, and about fifty smaller new settlements emerged in these remote northern areas. The number of new settlers in the Tyumen province was no less than 2,000,000 people. Such a pace of settling previously uninhabited or sparsely settled territories with extreme environmental conditions had never occurred before in world practice.

This explosive growth of population, dominated by young single males, has resulted in a distorted demographic structure which, according to assessments by some Russian demographers, is hardly capable of reproduction. The birth rate declined sharply, whereas the death rate grew because of accidents, diseases, alcoholism, narcotics addiction, etc. The situation

has been aggravated throughout several decades by a complete neglect of the development of a socio-cultural infrastructure. Nearly half of the urban population live in conditions conducive to the degradation of family, morals, health and cultural values.

The intensive in-migration has drawn recruits from various regions of the USSR, and from groups of different ethnicity and cultural heritage. Attracted by the lure of earnings, many chose to leave in a relatively short time due to the harsh environment and labor and residence conditions far below the standards in the rest of the country. Those who remained were settled in new heterogeneous centers, where, as mentioned, the turnover was rapid and, consequently, social links were especially unstable. This human contingent evidenced pronounced destructive tendencies.

In this connection, we also have to consider the residual effect of totalitarian forms of migration during the 1930s-1950s, the extensive net of labor-reformatory camps and other correctional

establishments in the North. These forms of forced migration favored the origination and reproduction of a specific type of a northern dweller, often with a criminal past, neglecting his own health, liable to use alcohol and narcotics. This population segment provided a social environment where strongly pronounced deviant ways of behavior were valued. Coupled with the incoming unstable element, this has resulted in an unprecedented growth of crime, the level of which is nearly double that of the entire country, in the expansion of alcoholism, narcotics addiction, gambling and prostitution. This segment attracts mostly young people, and this fact alone gives rise to serious concern about the future.

Oil and gas development and massive demographic change in the region had numerous negative effects on indigenous peoples of the North, as well as on old Russian settlers. The traditional mode of life of Northern indigenous peoples (Khanty, Mansi, Nentsy, Sel'kupy) was negatively affected.

Destruction of the environment through development has undermined the natural base and functioning of

their traditional occupations, namely reindeer-breeding, hunting, and fishing. They were unable to adapt to the new kinds of economic activity, and social and physical problems have become aggravated. There has been growth of the disease rate and of alcoholism. The descent into poverty has been rapid, and they find themselves under threat of ethnic degeneration and extinction.

Though their numbers grew slowly, their share in the total population of northern districts dropped from 21 percent in the early 1960s to less than two percent in 1989. The standards of the indigenous population's cottage industry production, and especially folk decorative art, have deteriorated considerably.

Many rural settlements in the southern part of the Tyumen province with a predominantly Russian population have been negatively affected. Oil and gas development has stimulated a great out-migration from this area to the northern districts. Thousands of young people have left their native settlements and never returned. Attracted by high wages, many farm

machine operators and specialists in agriculture moved to the North. Scores of villages have been completely abandoned. The structure of the rural Russian population has changed considerably. There is now a concentration of elderly people with a high mortality rate, whereas the birth rate is extremely low. This population is unable to maintain either its own reproduction, or the level of agricultural production in the region.

It should be pointed out that the fate of the Russian population is dramatic. The Russians, seen as a part of a nation assimilating small ethnic groups, are at the same time themselves becoming a subordinate group, unequal in rights, a minority in the «foreign» national territories.

The future of the Ukrainians, who constitute about one-fifth of the region's population, is uncertain. They face the dilemma of either to staying in the North and losing all their rights and property in their native newly independent country, or moving from the Tyumen North back to Ukraine without assurance of any job there at all. The same dilemma faces the

Azeri, the Armenians, the Georgians, and others who for several decades have contributed to the growth of oil and gas production in Siberia.

Taking into consideration that the Ukrainians are mostly skilled workers in oil and gas industry and, in particular, in construction, their departure will mean a deadly blow to the future of Siberian oil and gas production. Probably their case constitutes one of the most obvious examples demonstrating the interdependence of economic, political and demographic factors in this region.

The subsequent near collapse of the oil and gas industry aggravated the negative impacts on the general population throughout the region. The intensification of crisis signs in the economics of the oil and gas industry was accompanied by an unprecedented growth of disproportion in the development of the socio-cultural infrastructure in the Tyumen province.

The initially declared intention to create favorable conditions of life for the people never was accomplished. In spite of a rapid growth in

residential construction in the new towns, authorities were unable to cope with the main problems of the living conditions of the population, whose number increased too swiftly. Today over 250,000 families, or almost one-third of total population of the Tyumen province, dwell in houses without modern conveniences, in dormitories, and temporary dwellings.

Dissatisfaction with living standards is the main reason for massive out-migration and large-scale labor turnover.

Inflation in 1991-1992 destroyed literally all the savings of the population, whereas the system of compensation for work in the northern regions has turned into a mere fiction. Consequently, consumption of foodstuffs and other goods in the majority of families has been reduced; for many of them it has become impossible to travel during a summer vacation, or even to pay for a move to a new place of residence outside of the region. All these factors stimulate a rise in social tensions to an unprecedented, inconceivable state.

These problems manifest themselves in the exacerbation of conflicts between different groups of the population: workers and administration, young people and the elder generation, permanent workers and those engaged by the tour-of-duty method. Ethnic conflicts have occurred. The aboriginal ethnic groups protest more and more against their banishment from their indigenous lands, Russification, and pollution of the environment by the new settlers.

The environmental decay in the region has intensified extraordinarily. The production structures of the oil and gas industry block and paralyze all efforts directed at protection of natural, life-providing resources and at compensation for the harm done to the northern ecosystems. Between 1988 and 1990 the amount of harmful wastes from all sources of pollution by the oil industry reached 10.5 mn tons or more than 3 tons per every resident of the Tyumen province. According to the specialists' opinions, the region's environment cannot withstand any additional industrial load or even continued impact from existing pollution sources.

1.2. RESEARCH LITERATURE REVIEW.

During more than three decades which have passed since the beginning of the development of the Tyumen oil and gas resources hundreds of books and thousands of articles have been written on the topic by Russian and Western scholars. Most of these publications, scientific and popular, are devoted to the economic, political, and socio-cultural issues of the development of the Tyumen North, but fall short in analysis of major social processes.

1.2.1. RUSSIAN LITERATURE REVIEW.

The body of scientific publications written by Russian scholars includes a wide range of economic research conducted by A.Aganbegyan (1984), A.Granberg (1991), M.Bandman (1980), S.Slavin (1982), B.Orlov (1988), D.Belorusov (1982), V. Kerov(1982), S.Starovoitov (1991), and others. It must be borne in mind that Russian scholars were laboring under certain ideological constraints imposed from above. That is why the use of their publications in my research

undoubtedly requires some re-assessment and careful verification.

The above mentioned authors focused on the essential characteristics of economic issues in oil and gas development, the main stages of exploration, investments, planning, the economic management of oil exploitation, etc. There is also a number of scientific publications on technical-economic issues, geological problems of oil and gas exploration, technological aspects of exploiting the deposits, construction of facilities of the oil and gas industry, transportation, energy supply, etc. (A.Dertsakyan, 1967; V.Chirskov, 1986; I.Karyagin, 1979; and others).

Already in the 1970s the first attempts to generalize experience in the development of oil resources were made. It resulted in the first general publications (V.Muravlenko, and V.Kremnev, eds., 1973, 1977), which, unfortunately, cannot be looked upon as successful because of their domination by insignificant technological details and failure to address the wide scope of social and political issues

of the region's development. The same criticism applies to the latest general publication in this field (V.Dinkov, ed., 1987). The authors have tried to avoid a serious analysis of recent signs of crisis in Siberian oil development. The most critical assessment speaks only of «difficult years for Siberian oilmen.»

The Russian historians' contribution to the field is rather voluminous, but it is dominated by publications written by historians of the Communist Party (it should be noted that until the beginning of the 1990s there were two branches of historical science in the USSR - «History of the USSR» and «History of the CPSU,» and the latter surpassed in number of scholars involved, as well as in number of publications released).

Monographs and articles by D.Smorodinskoy (1973), B.Nim (1980), V.Danilov (1976), G.Lutoshkin (1979), N.Pashkov (1988), V.Karpov (1985) and others clearly expressed a «decorative» way of presenting the data, which amounts to a complete misrepresentation of the socio-economic processes.

Paradoxically, Russian historians who did not belong to the class of specialists in the history of the CPSU, paid hardly any attention to the scientific analysis of economic and social processes in the Tyumen North. The only valuable exceptions are the books by V.Alexeyev (1989) and V.Lamin (1989), but they are devoted exclusively to the history of discovery of the Siberian oil deposits. Unfortunately, even in these works the domination of ideological stereotypes is evident.

Even worse is the treatment of the problem by other social scientists. Soviet anthropologists and ethnographers have contributed numerous picturesque descriptions of the advantages gained by the indigenous peoples of the North on their way to socialism. Only in recent publications (post 1991) have they begun to discuss the real issues, namely the destruction of the Natives' way of life, extremely poor living standards and the state of social services, alienation from traditional occupations, and the real threat of the northern Natives' extinction.

(I.Gurvich, and Z.Sokolova, 1991; V.Bakshtanovskii, 1992; A.Pika, and D.Bogoyavlensky, 1995).

Useful information is provided by a number of publications by demographers (V.Perevedentsev, 1975; T.Gaponova, 1982; K.Misevich and V.Chudnova, 1973; A.Malinin and A.Ushakov, 1976; and others) and sociologists (K.Barbakova, 1989; G.Yurasova, 1980; V.Boiko, 1987, G.Kutsev, 1989; A.Pogorelskii and A.Khaitun, 1983; and others). Use of their data on the whole permits the recreation of a more or less real picture of demographic and socio-cultural processes, but their value is reduced by attempts to bypass many crucial issues, a characteristic of all Russian publications of the 1960s-1980s.

On the whole, Russian scientific publications do not provide a complete picture of the history and current state of industrial development in the Tyumen province, nor of its demographic and socio-cultural consequences. Surprisingly, no significant research has been devoted to the role of Siberian oil in economic and political relations with the entire world. For example, no one has analyzed the crucial

impact of large-scale exports of Siberian hydrocarbons on the foreign trade and policy of the former USSR.

Growing displays of crisis in the development of the Siberian oil-and-gas complex from the late 1980s were ignored by Russian scholars. In fact, nothing has been published, not even in the last five years. Some exceptions are analytical papers, prepared for the Russian government as the basis for a long-term program of social-economic development of the Russian North. On the other hand, numerous articles appeared in the Russian press, which severely criticized the current situation in the Siberian oil and gas industry. Groups of experts fulfil the role of «fire brigades» in the face of rapidly growing crisis, but do not serve as scholarly «brain trusts,» able to provide a detailed analysis of reasons for the present state of affairs and to suggest rational ways of overcoming the crisis.

1.2.2. WESTERN LITERATURE REVIEW.

Western publications on Siberian oil and gas development are not as numerous as the Russian ones,

but they contain much objective analysis and interpretation of the data. Economic and geographical works dominate (M.Goldman, 1980; A.Meyerhoff, 1983; T.Snabad, 1969; L.Dienes, 1987; P.Lydolph, 1990; R.Campbell, 1968, 1976; T.Armstrong, 1970, 1978; D.Wilson, 1980; and others).

Many scholars have analyzed the external, international issues resulting from Russian oil and gas industry development, as well as the USSR position in the world oil and gas market (R.Ebel, 1970; J.Russel, 1976; A.Klinghoffer, 1977; E.Hewett, 1984; F.Venn, 1986; B.Jentleson, 1986; J.Stern, 1987; M.Chadwick, 1987; W.Reisinger, 1992; and others).

There have also been a few successful attempts to study evolution of Soviet energy policy with a special focus on Siberian oil development (T.Gustafson, 1989), as well as analysis of the decision-making mechanism and formation of the Siberian oil lobby among the USSR government authorities (H.Chung, 1987).

At the same time, publications by Western scholars provide little information on the demographic processes in the Tyumen North, formation of manpower

resources, and social and cultural issues and conflicts. Those devoted to the demographic issues in the former USSR (J.Besemeres, 1980; J.Clinn, 1977; H.Desfosses, 1981; and others), traditionally focus on the general dynamics of the Soviet population and its national composition in different Soviet republics. The peculiarities of the Soviet North and the Tyumen province, in particular, have not been traced though I have to mention very interesting observations by T.Armstrong (1970, 1978), V.Conolly (1975), D.Wilson (1980), R.Lewis (1983, 1987), R.Rowland (1987), P.de Souza (1989).

The main reason for this lack is that there were only few sources available for Western scholars. It was impossible for them to use the archival and unpublished documents. These factors, undoubtedly, affect the depth of the research and analysis. Use of only published Soviet data significantly limits Western scholars in their studies. General monographs by Russian and Western scholars on issues concerning the fate of northern Natives in the USSR, recently published in the West (N.Vakhtin, 1992; R.Taras, 1992;

J.Forthyth, 1992; Yu.Slezkine,1994; G.Smith, 1996) are examples wherein such limitations have been overcome, though the data on the Tyumen North are tangential.

It should be noted also that no significant monographs on the issues of Siberian oil and gas development have been published in the West in the course of the last few years. The books and articles devoted to the economic crisis and break-up of the USSR, published in 1992-1996, contain only fragmentary notes about the decrease of oil extraction in Siberia, cuts in export and currency earnings, and the growing political tension between Moscow and the outlying regions. There is no detailed analysis of the modern demographic and socio-cultural state of the Tyumen province, which inevitably will play a significant role in the transition of Russia toward a market economy and social stability.

The need of such an analysis is evident, and not only from the Russian viewpoint. Many Western oil companies, producers of equipment and financial institutions are beginning to invest their money in the Tyumen province, and they have to know precisely

what they can anticipate. Knowledge of detailed characteristics of previous and current demographic and social processes in the Tyumen province could influence decision-making in Western business. It might illustrate the degree of social and political stability and help reduce the risk of investment in oil-extracting regions.

1.3. THE MAIN PURPOSE OF STUDY.

In the Tyumen North, a system of management was established by governmental fiat, which made demographic and social processes a component of the general model for northern development in the USSR. This model equated settlement with development. This theoretically justified model was put into practice on an unprecedented scale. It completely exhausted the resources and precluded any possibilities for further development in the Tyumen province. A radical change in policies governing the oil and gas industry in the region must take place. But a change without a thorough scientific analysis of the past experience and comprehensive assessment for future actions together with positive and negative consequences of

such actions that may lie ahead, could bring worse results than one would expect.

Taking this fundamental consideration into account, the main goal of this thesis is to study the demographic and social consequences of rapid oil and gas development in Siberia, to show the experience of solving or failing to solve of wide range of social and cultural issues, and to sum up the results of both the economic impact on the social-cultural processes and the social impact on industrial production. This goal is to be achieved through addressing the following aspects:

- to reveal the main priorities in the regional demographic and social politics, as well as the mechanism for achieving set goals in the course of rapid industrial development of remote northern areas;
- to investigate the main trends in the formation of the permanent population, changes in its composition and its distribution over the region, with a special focus on migration and its impact on population composition and population reproduction;

- to assess the processes of reproduction among the indigenous population and to reveal the resource development impact on their conditions and position within the oil-and-gas complex;

- to study the experience in creating social infrastructure, its functioning and effectiveness, to determine the infrastructure's role in the course of massive out-migration and labor turnover and, eventually, in achieving the goals of oil and gas production;

- to define the positive and negative consequences of oil and gas development, their scale, balance, and interdependence;

- to determine the possible ways to overcome existing social contradictions and to describe some elements of rational strategy to be applied in the future.

1.4. CHRONOLOGICAL AND GEOGRAPHICAL FRAMEWORK.

The chronological framework encompasses the period from the 1960s to the beginning of the 1990s. This period is characterized by a large-scale growth of the oil and gas industry, population and manpower

resources, a dramatic change in their composition and distribution over the region, and gradual accumulation of unsolved demographic and social issues. The 1960s coincide with the beginning of oil exploitation, and the upper date was chosen for the following reasons.

The break-up of the former USSR at the end of 1991 and the start of real economic reforms in 1992 have radically changed the main directions of economic, demographic and social processes in the region. A sharp decline in oil production and the collapse of many industrial structures in the Tyumen province were an immediate reaction to the first market reforms. These signaled the beginning of a new stage in regional development, which differs fundamentally from the previous one.

Moreover, since the early 1990s the region has entered a period of deep demographic shock associated with a sharp decrease in the birth rate as well as with a mass out-migration. The birth rate dropped from 17.4 in 1989 to 10.3 in 1993 per 1,000 population, whereas the death rate doubled. Natural increase in population (the gap between birth rate and death rate)

reached the lowest point in the demographic history of the region -- 0.8 in 1994 per 1,000 population, as compared to 15.1 in 1985 and 11.4 in 1989. For the first time, the balance of migration was negative. In 1990-1992, more than 364,000 people migrated out of the Tyumen province. A net loss of population of 58,000 seriously affected the size of the manpower pool and its composition. These processes undoubtedly require a special study and special research tools. Thus, the decision was made to limit this study to the period between 1960 and the late 1980s-early 1990s.

The geographical framework of this thesis encompasses the whole Tyumen province, which has two autonomous okrugs (administrative districts) within its boundaries - the Khanty-Mansyiskii okrug, where the main oil deposits are located, and the Yamalo-Nenetskii okrug, with the majority of natural gas deposits. The area of the Tyumen province is about 1.7 mn sq. km. Environmental conditions vary from those of the temperate climatic zone in the South to the Arctic tundra in the North. Most of the oil and gas resources are concentrated in the regions of Middle Ob'

(Priobye) and those of the Far North, which have an extremely severe climate with low temperatures and permafrost. Almost all the oil deposits are situated in the zone of continuous marshes.

1.5. METHODOLOGICAL APPROACH AND SOURCES.

A complex interdisciplinary approach is required to accomplish the purpose of the study as outlined. I propose to use a positive method of scientific analysis, which, apart from treatment of this or that phenomenon in its historical evolution, allows the use of historical retrospection for the creation of predictive models. The method of extracting and studying the historical experience allows not only the compilation of an aggregate of consecutively described information on the subject (the so-called «historical knowledge»), but a concentrated assessment of the past and of possible alternative variants with respect to subsequent development. It also allows assessment of the results and lessons of this past experience from the point of view of modern social practice.

This approach makes it possible, apart from creating a retrospective view of the development of

various social processes, to accumulate useful, practically valuable information in the form of specially selected and systematically analyzed data, which are necessary for the understanding of immediate practical tasks. This information can form a basis for making administrative decisions, can substantiate them, and, when interpreted, acquires a predictive function.

Extracting and studying the historical experience is a methodological device, which allows to interpret the demographic and social-cultural situation emergent in the Tyumen province not only as a fact, but also as a complicated interrelation between possibility and reality. This situation must be observed as the aggregate of alternatives of the region's development, both realized and non-realized, but objectively presented in the historical process.

Obviously, the «grains» of historical experience, extracted this way, are not a ready solution for the urgent problems of today. Their application implies analyzing the analogies of positive and negative solutions to concrete problems in the formation of

population and manpower resources, and the development of the social-cultural infrastructure of the region, rather than pursuing direct analogies or the reproduction of previous models of social reality. Without this, the selection of optimal decisions for the future is difficult, or even impossible. Otherwise, by lacking a comprehensive understanding of the correlation between the past, present and future, reviving Russia is doomed to develop blindly, repeating the same errors over and over, confirming Hegel's well-known statement that nations and governments had never been taught by history and had never acted according to the lessons that might be derived from it.

At least six main groups of sources are utilized in this thesis. Each is discussed below.

1. The first group of sources comprises clerical documentation of ministries and departments, industrial enterprises, construction and geological trusts, which were involved in the development of Siberian oil and gas resources. Official documents of the Communist Party, Soviet, and Trade-Union bodies of

the Tyumen province are also considered. The following categories of documents may be distinguished within this group:

- a) annual reports and explanatory memoranda to them;
- b) minutes of meetings of colleges, scientific-technical councils, production conferences in the ministries, departments and industrial enterprises;
- c) short-hand records of plenums, sessions and conferences of the Communist Party, Soviet, and Trade-Union bodies;
- d) references, reports and accounts of the results of different revisions and considerations on the applications and complaints of the working masses;
- e) correspondence of the ministries and departments, local authorities with the organizations and enterprises of oil and gas industry.

These documents are preserved in different Central State Archives, Ministerial and Departmental Archives in Moscow, in the State Archive's local collections in Tyumen and other cities, and in numerous archives of industrial enterprises. The origin of these documents

significantly facilitates the procedure of verification, as they were intended for internal use and, therefore, contain objective information, on which concrete managing and administrative decisions were based.

2. Statistical data on the population of the Tyumen province, its composition, distribution, and migration, and the development of a social-cultural infrastructure. Attention is paid to the primary statistical data preserved in special deposits of local statistics bodies. The collections of statistical data published in a few copies with a stamp «For official use only» and intended for local authorities, are also of great importance. Statistical data that were officially published, being considerably leveled and containing smoothed-out figures and estimates, are to be used to a lesser extent. The use of statistical data allows for revelation of a real picture of the crisis, which has affected all the components of the regional population and the social-cultural infrastructure.

3. Periodicals are also of great importance.

Analysis of newspapers and magazines in the central press makes it possible to reconstruct the elements of the Soviet leadership's policies toward the development of the Tyumen North. At the same time, the local periodicals (due to the more limited censorial restrictions in the provinces) contain numerous vivid illustrations of the demographic and social consequences of «the fight for oil,» which convey a fairly precise idea of the crisis situation in the region.

4. Memoirs represent the fourth group. Some of them, from the pens of Communist Party and Soviet leaders, heads of the oil and gas enterprises have been published (B.Shcherbina, 1972; V.Bakhilov, 1975; K.Mironov, 1982; V.Kuramin, 1983; N.Baibakov, 1984; F.Salmanov, 1988; V.Churilov, 1989). A number of memoirs are available in the archive collections. Although most of the authors tried to color the truth, memoirs contain valuable data on many issues of regional social development.

5. The results of my personal sociological research are the basis for many considerations. In the course of field research in 1986-1992, about 8,400 employees in the oil and gas industry were polled. Typical for every historical study «search for sources» has been transformed this way into «creation of sources.» Therefore, traditional lack of sources' conformity with the goals of study has been overcome. The questionnaires were processed by computers. Hundreds of tables and graphs have been made. Precise data on the composition of manpower resources by sex, age, education and skill; revelation of oil and gas industry employees' motives to relocate to the North; people's perceptions of different aspects of labor and every day life, etc., are by no means all the advantages to be derived from use of sources of sociological origin.

6. As a very important complementary source I must mention my personal observations, meetings and talks with different people from rank-and-file workers to directors of industrial enterprises and representatives of local authorities. Numerous field

trips over the Tyumen province during 1980-1997 allowed me to implement so-called «participant observation» that is widely applied in anthropology, sociology and other branches of humanistic knowledge.

Thus, the aggregate of above mentioned sources completely meets the goals of the study, that is to say:

- it allows to bring to light the aggregate of social consequences of rapid Siberian oil and gas development and the essence of regional social politics;

- it provides for application of various scientific methods and research tools, which are applied in history, demography, political sciences, sociology, etc.;

- it embraces the maximum quantity of information due to a high concentration of information in the sources themselves;

- it gives an opportunity not to confine to retrospective analysis only, but also to formulate some suggestions concerning the future.

2. MIGRATION PATTERNS IN THE TYUMEN NORTH.

With the impact of industrial development of oil and gas deposits in 1964, skilled workers and engineers were increasingly required for the new sectors. This demand was satisfied by specialists from the old oil-extracting regions: Tataria, Bashkiria, Azerbaijan, Ukraine as well as from the industrial centres of the European part of the USSR and the Urals. The biggest oil enterprise - Glavtyumenneftegas - did receive every day up to 300 letters appealing for employment.¹ By the end of 1965 the total number of oilmen, geologists and of those involved in gas-extraction industry, exceeded already 43,000.² The process of formation of the staff at oil-and-gas enterprises gave strong impetus to the migration of population to the area (see table 1). By the end of 1973 the regions of oil-and-gas extraction had received and accommodated more than 400 thousand people, the number of employees had doubled.³

¹ Muravlenko and Kremnev (1973), p.206.

² TsGARF, f.374, op.35, d.6671, l.114-115, 154;
GATO, f.1861, op.1, d.41, l.4; f.1903, op.1, d.479, l.22.

³ GATO, f.124, op.205, d.16. l.5; d.83, l.31.

Table 1

Migration processes in the Tyumen province,
in thousand

Years	In-migrants		Out-migrants		Net migration	
	Total	to northern okrugs	Total	from northern okrugs	Total	in northern okrugs
1966	148.3	62.9	108.9	42.1	39.4	20.8
1967	148.8	65.5	112.9	44.7	35.9	20.8
1968	148.8	67.0	120.7	48.2	28.1	18.8
1969	150.8	66.0	125.5	47.5	25.3	18.5
1970	154.6	72.4	134.3	52.9	20.3	19.5
1971	167.4	78.4	136.0	54.9	31.4	23.5
1972	173.6	89.3	133.7	58.2	39.9	31.1
1973	178.9	92.4	133.5	59.2	45.2	33.2
1974	187.5	100.3	138.1	64.0	49.4	36.3
1975	191.4	100.8	138.4	65.3	53.0	35.5
1976	197.3	109.7	143.2	68.8	54.1	40.9
1977	196.3	111.9	154.8	76.8	41.5	35.1
1978	218.0	136.6	165.1	86.5	52.9	50.1
1979	234.4	155.1	179.1	101.6	55.3	53.5
1980	239.2	172.1	170.0	101.9	69.2	70.2
1981	286.4	217.0	170.4	106.8	116.0	110.2

(continued)

Table 1 (continued)

Migration processes in the Tyumen province,
in thousand

Years	In-migrants		Out-migrants		Net migration	
	Total	to northern okrugs	Total	from northern okrugs	Total	in northern okrugs
1982	282.4	214.1	171.8	113.9	110.6	100.2
1983	302.5	219.9	198.0	129.0	104.5	90.9
1984	306.9	225.4	204.8	135.4	102.1	90.0
1985	307.1	225.1	206.3	137.8	100.8	87.3
1986	324.9	236.9	204.8	131.7	120.1	105.2
1987	262.4	175.6	211.8	133.8	50.6	41.8
1988	236.6	154.8	194.0	120.9	42.6	33.9
1989	209.4	140.0	179.4	117.5	30.0	22.5
1966- -1989	5,253.9	3,289.2	3,835.5	2,099.4	1,418.4	1,189.0

Source: Estestvennoe dvizhenie i migratsiya naseleniya Tyumenskoi oblasti za 1986-1989 gody. Tyumen, 1990, pp.85, 87, 89; Estestvennoe i mekhanicheskoe dvizhenie naseleniya Tyumenskoi oblasti za 1986-1987 gg. Tyumen, 1989, pp.51, 53, 55; Tyumen State Department of Statistics. Current files on population migration, 1966-1989.

However, by the middle of the 1960s the tendency of reverse migration took place - over the first decade of development there were 70 leaving workers per every 100 arriving ones, which hindered the formation of a stable workforce. A particular difficulty was the attraction of highly qualified workers and engineers of oil-and-gas extraction. For every person staying in the Tyumen North at least three had to arrive.⁴ As a result, 9,1 million persons engaged in the counter migration streams between 1966 and 1989. This fact proved to be unprecedented in the demographic history of the former USSR.

2.1. MOTIVES FOR MIGRATION.

Analysing the motivation of in-migration into the regions of new industrial development of the Tyumen North the majority of western and Russian researchers agree that the first and foremost role was played by high wages and salaries.⁵ Establishment in the former USSR system of the so-called «northern privileges» was aimed to attract the required new labor force to

⁴ Aganbegyan (1984), p.9; Khaitun (1983), p.11.

⁵ Armstrong (1970); Conolly (1975); Perevedentsev (1975), Malinin and Ushakov (1976), Kutsev (1989), Gustafson (1989).

remote northern regions for implementation of large-scale projects of development of rich Siberian natural resources.

To assess the motives of in-migration to the Tyumen North, sociological methods must be used. In 1987-1988 more than 4,200 workers of gas industry in all large production subdivisions of the branch located in Khanty-Mansiyskii and Yamalo-Nenetskii autonomous okrugs filled in a special questionnaire developed by the author of this thesis. The data show that the incentives for migration were quite stable for the majority of surveyed populated areas (see table 2).

The leading motive attracting the workers into towns and settlements of the Tyumen North was high wage rates. This was the primary motive of coming there for 48.5 percent of workers. The share of this motive increases proportionally to the wage rate. In Nadym and Novy Urengoi, with the highest wages, it was greater than in Surgut and Igrim.

Of interest is that the motives related to public acknowledgment of the significance and prestige of

Table 2

Motives for migration to the Tyumen North, percent

Motives	Igrim	Nadym	Surgut	Urengoi	All workers
High wage rates	32.4	49.0	40.1	58.4	48.5
Desire to gain foothold	4.2	6.5	5.3	6.4	5.6
Prestige of the North	3.1	5.1	5.5	6.2	5.7
Wish to acquire new occupation	1.7	1.4	3.4	2.1	2.2
Desire to get more skilled job	2.9	2.7	2.4	3.0	2.8
Wish to contribute personally to the development of the North	9.3	19.0	13.0	19.3	15.8
Desire to test him/herself in extreme situation	6.8	15.7	10.4	15.4	11.9
Change of impressions	5.6	8.1	9.4	12.6	8.5
Absence or lack of housing	24.0	21.9	33.7	22.5	23.7
Personal motives	27.5	19.7	25.9	25.0	23.6
Other motives	7.7	3.3	5.7	2.4	3.9

Source: data of the survey conducted by the author of this thesis in the cities of the Tyumen North in 1987-1988

labor in the oil-and-gas complex proved to be high. This testifies also to a relatively effective Soviet system of propaganda that had created quite an attractive image of a Siberian pioneer. The survey showed that 15.8 percent of workers wished to contribute personally to the development of the North, 5.7 percent were attracted by the prestige of northern construction, 2.2 percent wished to acquire a new occupation and 2.8 percent of workers sought a job requiring more skill than the position they occupied before migration. It is characteristic that the workers were interested in this motive in accordance with their level of skill. Thus, none of the unskilled workers had the motive to find a more skilled job, but this was the motive for 3.2 percent of the workers of middle and higher qualification categories.

About one-fourth, or 23.7 percent of workers came to the Tyumen North because of lack of housing in the regions where they lived before. This group consisted mainly of young men under the age of thirty. The conditions of their out-migration were restricted, since their work in the oil-and-gas industry was

related with the opportunity to receive a well-built dwelling with all amenities. Among them the intention to leave the Tyumen North in case of dismissal was 2.8 times rarer than among workers in the oil-and-gas industry on the whole. At the same time this group formed very mobile part of the labor force in the region of oil and gas development. They were moving from one place to the other looking for better living conditions in different cities and settlements of the North.

Of importance also were the motives of gaining foothold, desire to test oneself in extreme situation - 17.5 percent of surveyed workers; 8.5 percent of them sought changes of impressions, 23.5 percent named personal motives without explaining their nature.

The overwhelming majority of migrants went to work in the North for a fixed term. As a rule, it fluctuates from 3 to 10 years (74.5 percent). However, the initial plans changed for many. Thus, 68.2 percent of the workers employed in the Tyumen North for more than 10 years initially intended to stay here for no more than 5 years.

The data do not supply an idea of remarkable qualitative differences between the migrants having different motives. They had equal combination of moral and material incentives. Certain differences are manifested by the analysis of the motives of migration to the northern districts according to different sex and age groups (see table 3). Men were to a greater degree oriented towards high wages, acquiring an occupation and perfection of skills. They had a stronger desire to gain a foothold. Women were more likely to migrate for moral or personal reasons.

The motive of high wages in the North occupied the leading position among all the age groups. However, its share was higher among middle-aged workers. The youth sought perfection of skills. Of great importance for them was lack of dwellings at their previous places of residence. It is remarkable that the desire to contribute personally to the development of the North was to a greater extent the desire of middle and elder age groups, but not for the youth. It may be explained by the fact that in the middle age groups the share of skilled workers was higher and so

Table 3

Motives for migration to the Tyumen North
by sex and age groups, percent

Motives	Sex		Age groups			
	M	F	under 20	20-24	25-29	30-34
High wage rates	52.3	35.1	34.0	43.9	49.6	54.0
Desire to gain foothold	5.9	4.8	4.3	8.5	5.9	3.8
Prestige of the North	6.0	4.9	5.4	5.0	5.2	5.7
New occupation	2.3	2.1	3.2	3.0	1.8	1.7
More skilled job	3.1	1.6	3.4	3.3	2.0	2.4
Wish to contribute to development of the North	16.8	12.6	9.1	11.4	13.0	18.6
To test him/herself in extreme situation	11.3	13.7	11.4	12.4	9.1	13.0
Change of impressions	8.0	10.5	6.3	7.9	9.9	9.3
Lack of housing	22.5	27.6	16.2	28.3	33.0	21.7
Personal motives	22.1	29.0	24.3	24.1	22.0	24.5
Other motives	3.3	5.9	14.2	4.3	3.1	1.1

(continued)

Table 3 (continued)

Motives for migration to the Tyumen North
by sex and age groups, percent

Motives	Age groups					
	35-39	40-44	45-49	50-54	55-59	60+
High wage rates	54.0	55.9	55.4	39.5	61.5	41.3
Desire to gain foothold	4.6	2.5	2.1	1.9	0.7	-
Prestige of the North	8.7	5.0	5.8	15.8	7.7	-
New occupation	1.7	0.8	2.1	1.3	-	-
More skilled job	3.6	3.4	3.3	-	-	-
Wish to contribute to development of the North	24.3	23.5	24.8	34.2	38.5	40.6
To test him/herself in extreme situation	14.2	13.9	14.9	7.9	-	-
Change of impressions	6.7	7.1	14.0	13.2	7.7	-
Lack of housing	15.9	8.4	8.3	7.9	7.7	12.6
Personal motives	22.4	23.9	26.4	28.9	7.7	51.6
Other motives	2.9	2.5	1.7	-	-	-

Source: data of the survey conducted by the author of this thesis in the cities of the Tyumen North in 1987-88

awareness of the value of their production experience and labor potential to be used in the North was higher.

2.2. GEOGRAPHICAL CHARACTERISTICS OF MIGRATION.

The analysis of geographical directions of migratory streams is to a great extent hampered by the fact that the local statistics up to the second half of the 1980s had never been published. These were referred to the category of state confidential information. The accounting of migrants was mainly based on the data of passport registration in the towns and settlements of the Tyumen North.

However, this system of accounting failed to be complete, as the majority of migrants lived in hostels and even in tents without any registration in the institutions of passport control. In view of this, the most exact information on the origin of in-migrants can be obtained only by analyzing the documents kept in staff departments of the oil-and-gas enterprises. Everyone employed filled in a special registration form in which sex, age, place of birth, marriage status, children, education, place of previous job,

etc. have been noted. The number of these documents kept in the associations of oil-and-gas industry amounts to many hundreds of thousands of files. It is one of the most massive sources on the history of demographic processes in the region.⁶

Well-organized selection of these forms and application of quantitative methods of investigation allow us to obtain quite trustworthy information. Naturally, the data of staff departments counted only able-bodied population, i.e. only those who were employed. The registration forms lacked accounts of the other members of families who should be included in the total number of migrants. But considering the average number of family members of the migrants, the mistakes will hardly exceed an admissible quantity. The chronological bounds of the source (all the able-bodied population in the 1960s-1980s) allow us to follow the retrospective dynamics of migrational processes throughout the whole period under discussion with a great degree of probability, and to identify the most general tendencies and regularities.

⁶ Slavko (1986), p.88.

We have obtained a complex of sources suitable for computer processing of information and application of modern methods of investigation, in particular, quantitative and factor analysis as a result of studying 8,600 personal registration forms of the workers of oil-and-gas industry over the period of 1966-1985. Each individual for the selective totality was chosen on the basis of combinations of typical and serial extracts by the method of an accidental non-repeated selection. According to our calculations trusting intervals for general totality do not exceed $\pm 1.2-1.4$, i.e. they provide a high precision of calculations.⁷ In an analogous way, an additional group of 2,200 registration forms for the period of 1986-1989 was collected in 1989.

Computer processing of the data allowed us to show the basic tendencies of the changes in the composition of the migrants to be employed in oil-and-gas complex and, in particular, to reveal the main regions from which the migrants came (see table 4).

⁷ Logunov (1991), p.150-151.

Table 4

Workers of the oil-and-gas complex by regions
of previous employment, percent

Region	Igrim	Nadym	Surgut	Urengoi	All workers
Khanty-Mansiyskii okrug	6.3	1.1	8.5	4.7	5.3
Yamalo-Nenetskii okrug	2.5	5.4	0.9	11.9	7.1
South of the Tyumen province	2.4	2.3	6.4	2.5	3.6
Other parts of Western Siberia	1.9	5.6	6.0	8.3	4.5
Eastern Siberia	1.0	2.0	2.4	1.6	2.1
Ural	19.5	7.9	12.7	7.3	11.5
Ukraine	15.5	24.4	19.5	18.3	19.6
Povolzhye	5.1	9.7	7.0	11.0	8.5
Other parts of European Russia	28.0	26.2	18.6	23.1	22.8
Middle Asia and Kazakhstan	4.6	4.8	5.2	2.4	4.5
Other	13.2	10.6	12.8	8.9	10.5
Total	100.0	100.0	100.0	100.0	100.0

Source: computer processed data of workers' registration forms obtained from staff departments at the enterprises of the oil-and-gas complex, 1966-1985

The majority of workers, or 50.9 percent, arrived in the Tyumen North from the European part of the former USSR. A notable trend was a great share of migrants from Ukraine. This situation was not accidental. Before the beginning of the development of Siberian deposits of oil and gas, the center of the gas-extracting industry was in Ukraine. A powerful staff potential of gas-extractors had been established there. Under the impact of the decrease in rate of gas extraction and the total labor excess in the republic, as well as of high wage-rate in the Tyumen North, many workers made the decision to move. To a certain extent, this was also promoted by the activity of the enterprises and associations of the oil-and-gas complex which attracted skilled personnel experienced in working in the oil-and-gas extracting sector to the region.

The transfer of the major activity on oil-extracting from Povolzhye to Western Siberia caused in-migration of skilled personnel mainly from Tataria and Bashkiria. The majority of them became employees in the oil-and-gas industry. The migrants from

Povolzhye constituted 8.5 percent of the new staff. Among them there were many drill workers, operators of oil-and- gas extraction, specialists in oil rig constructions and in the repair of oil-wells. Their share in the drilling enterprises reached on the average 12.2 percent of new recruits, in oil-and-gas extracting associations - 11.0 percent, which was much higher than the average estimates.

There was a high share of workers previously employed in the regions with developed branches of fuel-and-power complex among the migrants from the European part of the former USSR. In particular, there were many migrants from Stavropolye and Orenburg province where extraction of natural gas was intensively growing in the 1940s-1950s.

About 11.5 percent of the labor force were supplied to the oil-and-gas complex by the industrial Urals. Territorial closeness to the areas of the first oil and gas deposits predetermined the role of the Urals as one of the basic regions for in-migration to the Tyumen North, especially at the initial stage of the development of oil-and-gas resources.

The industrial enterprises and construction trusts, growing mainly in the northern undeveloped part of the Tyumen province, were oriented towards utilization of local manpower to a less extent than other economic programs carried out in Siberia in the post-war years. The Tyumen province itself supplied no more than 16.0 percent of labor force in the 1960s-1980s, and together with other parts of Western and Eastern Siberia - 22.6 percent, i.e. less than a quarter. The majority of workers who came from the Tyumen province and other Siberian regions were in fact «secondary» migrants from the other provinces of the former USSR, mainly from its European part. Taking into consideration the workers' place of birth there were only 10.1 percent newcomers who were born in Siberia; 13.9 percent of migrants were born in the Urals, and 66.6 percent - in the European part of the former USSR (see table 5).

The proportion of the main regions of in-migration was not static throughout the period under discussion. At the initial stage of development of oil and gas deposits in the second half of the 1960s, the demand

Table 5

Workers of the Tyumen oil-and-gas complex
by place of birth, percent

Place of birth	Igrim	Nadym	Surgut	Urengoi	All workers
Khanty-Mansiyskii okrug	3.1	-	1.2	0.3	1.1
Yamalo-Nenetskii okrug	0.1	0.9	-	0.6	0.5
South of the Tyumen province	1.9	2.3	5.3	1.9	2.7
Other parts of Western Siberia	2.6	3.0	5.5	3.0	3.5
Eastern Siberia	1.2	1.6	3.3	1.9	2.3
Far East	1.2	1.1	1.3	1.5	1.5
Ural	20.7	10.6	15.2	10.8	13.9
Ukraine	16.6	23.8	19.3	23.9	22.0
Povolzhye	8.0	11.5	9.8	15.0	11.2
Caucasus and Transcaucasus	5.2	8.4	5.7	9.5	7.0
Other parts of European Russia	32.6	27.6	24.5	24.6	26.3
Middle Asia and Kazakhstan	4.2	6.3	4.4	4.4	5.2
Other	2.6	2.9	4.5	2.6	2.8
Total	100.0	100.0	100.0	100.0	100.0

Source: computer processed data of workers' registration forms obtained from staff departments at the enterprises of the oil-and-gas complex, 1966-1985

for manpower was relatively low. It was satisfied mainly by local workers, migrants from other Siberian cities and villages as well as from the Urals as it was close to the Beryozovo-Igrim group of gas deposits - 48.7 percent. The European part of the USSR supplied 37.5 percent of manpower, other regions - 12.8 percent. From the beginning of the 1970s under the impact of development of the largest deposits of Middle Priobye and Polar area, the significance of European regions of the USSR as the main suppliers of manpower had sharply increased. On the whole they dominated throughout the 1970s. Against the background of these processes the share of the Urals, Siberia was reducing. The share of Kazakhstan, Middle Asia, Far East and other regions was slightly increasing due to the wide popularity of the oil-and-gas venture in Western Siberia and the media's continuous attention focused on it. In the 1970s the most rapid increase of the population of West-Siberian oil-and-gas complex took place. In the 1980s the situation had changed. Inter-regional movement of population and manpower started playing an increasingly important role,

recruitment from the European part of the country had been considerably reduced.

In analyzing the direction of inter-regional migration its distinct northward character should be emphasized. For example, considering the population's migration from Khanty-Mansiyskii okrug to Yamalo-Nenetskii one is 7-8 times as intensive as the reverse one.⁸ This tendency was stimulated by the general northward shift of oil and gas extraction in the Tyumen province as well as by a higher wage-rate and its specific coefficients in these parts of the area.

The official statistical data published since the beginning of the 1990s testifies to the above-mentioned tendencies. Thus, the territorial characteristics of new migrants to Yamalo-Nenetskii autonomous okrug in 1991 were as follows: the Tyumen province - 23.2 percent, other part of Western Siberia - 4.3 percent, Eastern Siberia - 1.6 percent, the Urals - 14.0 percent, the European part of the former USSR - 42.4 percent (including Ukraine - 19.2 percent, Povolzhye - 6.7 percent, other European regions - 16.5

⁸ Estestvennoe dvizhenie i migratsiya... (1995), p.11-12.

percent), republics of Middle Asia, Kazakhstan and Transcaucasus, - 6.8 percent. The analogous data on Khanty-Mansiyskii autonomous okrug in 1991 did not essentially differ: the Tyumen province - 24.3 percent, other part of Western Siberia - 4.9 percent, Eastern Siberia - 1.2 percent, the Urals - 20.8 percent, the European part of the USSR - 35.0 percent (including Ukraine - 13.6 percent, Povolzhye - 7.6 percent, other European regions - 13.8 percent), republics of Middle Asia, Transcaucasus, Kazakhstan - 7.7 percent.⁹

Thus, it may be inferred that there are evident indications of the intensification of inter-regional migration and a stable position of large industrial regions (the Urals, Povolzhye) having traditionally been the source of population growth in the Tyumen North throughout the whole period under discussion. The main characteristics of migrational streams to the region (domination of migrants from the European part of the former USSR and Ukraine) have not been changed significantly.

⁹ Estestvennoe dvizhenie i migratsiya... (1995), p.137-146.

The data from registration forms of the workers of the region's oil-and-gas industry testifies to the youths' dominance in the composition of migrants (see table 6).

Already at the initial stage of oil-and-gas extraction in the Tyumen North the share of young people among in-migrants under the age of thirty was 53.9 percent; in the second half of the 1980s it had reached 63.7 percent of all new-comers. This increase was mainly sustained by the group aged 20-24, promoted by the practice to employ graduates from vocational technical establishments, soldiers transferred to the reserve as well as young men arrived to the region by public call. The share of elder age groups was stably reducing. The actually shaped age limit for migration was 40-44 years, which was caused by the severe climate conditions in the Tyumen North as well as by reduction of a migratory mobility in the course of aging. In the second half of the 1980s merely 1.3 percent of the people were over 45 years among the aggregate number of the migrants to the area to be employed in the oil-and-gas complex.

Table 6

In-migrants to the Tyumen province by
different age groups in 1966-1989, percent

Age groups	1966-70	1971-75	1976-80	1981-85	1986-89
under 18	2.6	4.1	3.8	5.2	5.7
18-19	10.3	3.3	4.6	5.3	4.4
20-24	15.4	27.4	28.6	29.3	28.4
25-29	25.6	26.6	25.9	23.0	25.2
30-34	24.6	17.0	18.0	18.1	18.3
35-39	13.0	13.7	9.3	10.1	12.6
40-44	5.2	5.0	6.8	6.0	4.1
45-49	2.8	2.5	2.2	1.6	1.0
50-54	0.4	0.3	0.6	0.8	0.2
55 +	0.1	0.1	0.2	0.6	0.1
Total	100.0	100.0	100.0	100.0	100.0

Source: computer processed data of workers' registration forms obtained from staff departments at the enterprises of the oil-and-gas complex, 1966-1989

2.3.IMMEDIATE IMPACT OF MIGRATION.

The analysis of the migration processes, the dynamics of which are illustrated by table 1, allows us to identify the main tendencies and results of the movement of populations in the regions of new industrial development of the Tyumen North over the period under discussion. Let us outline the most important ones.

For the first, from the very beginning of industrial development of oil-and-gas deposits of the Tyumen province in general and of its northern autonomous okrugs, a positive balance of migration had been shaped, whereas at the end of the 1950s it was negative there as well as in many regions of Siberia.¹⁰

Afterwards it was the migration flood to the Tyumen North that radically changed the migration situation beyond the Urals. Since the second half of the 1970s and especially during the 1980s it had formed a positive migration balance in Siberia on the whole.¹¹

¹⁰ Gushin (1991), p.52.

¹¹ Alexeev and Logunov (1990), p.137.

For the second, the average annual in-migration estimated as slightly more than 90 thousand subjects in 1960-1963, had reached 150 thousand subjects in 1966-1970 and was continuously increasing.¹² In the second half of the 1970s it exceeded 200 thousand, and in 1983 it already exceeded 300 thousand subjects.¹³ The dynamics of this growth were closely related with the processes of industrial development of previously non-inhabited regions.

Thus, in-migration was stable at the first stage in the second half of the 1960s and was characterized by the creation of a production base, exploitation of the Shaim oil deposits and the Beryozovo-Igrim group of gas deposits with low debits of wells. Since the end of the 1960s it started increasing due to putting into operation the largest Samotlor, Medvezhye and other deposits. Over these years the amount of construction had increased, and large building trusts as Glavsibtruboprovodstroi, Clavtyumenneftegazstroi, Sibcomplectmontazh, Glavzapsibzhilstroi and others

¹² Misevich and Chudnova (1973), p.105.

¹³ Alexeev and Logunov (1990), p.137.

emerged. The network of urban settlements was formed. Of interest is the fact that since 1972 the main influx of new-settlers was directed just to the northern districts. The third stage of migration growth covers 1977 to the first half of the 1980s and is characterized by the highest pace of migration of population to the area of new industrial development. In these years a considerable extension of production and social infrastructure of the oil-and-gas complex took place: oil extraction at dozens of new deposits was initiated, in-migration to the Arctic area where Medvezhye and Urengoi gas deposits had reached their planned capacity was increasing, and the exploitation of Yamburg deposit commenced. At the same time this period in the former USSR was marked by the highest growth of labor resources which predetermined the intensity of migration to the newly developed region.¹⁴

Of great importance is also the fact that in the first half of the 1980s the rate of payment of the workers of oil-and-gas complex was 2.5-3 times higher than in the national economy on the whole. The average

¹⁴ Khaitun (1983), p.44.

wage of workers and employees in Nadym had reached 514 roubles a month, in Novy Urengoi - 500 roubles.¹⁵ The workers in the largest trust Severtruboprovodstroi were paid on average 671 roubles a month, whereas the average salary in the country was less than 200 roubles. In Urengoitruboprovodstroi trust the average monthly payment reached 708 roubles.¹⁶

From 1987 the absolute estimates of in-migration to the region were decreasing as well as the proportion of newcomers to the northern districts where the production base of oil-and-gas complex was located. These changes were caused by the increasing crisis in the region's socio-economic growth, strengthening of interregional migration exchange, reduction of differences in the wages of northern workers and those of already developed regions, and destructive consequences of negligence to the social, everyday life's and cultural infrastructure.

For the third, the mass in-migration of population to the oil-and-gas extracting regions was accompanied

¹⁵ Tyumenskaya pravda, 1985, Jan.29th.

¹⁶ Alexeev, Logunov and Shabanov (1987), p.130.

by an intensive out-migration, the amount of which correlated with that of in-migration. High intensity of out-migration was determined mainly by subjects residing in the northern regions less than a year, the share of this category of migrants of the total number leaving was 70 percent.¹⁷

The main cause of high level of out-migration was dissatisfaction with the rate of solving of social and everyday problems, in 1966 this had pre-determined 75.4 percent of cases when workers left their jobs in the oil industry.¹⁸ In 1970 one third of the workers of the region's oil industry left the oil-producing enterprises due to the lack of dwelling and children's establishments.¹⁹ Motives for leaving related to living standards were cited by 78.6 percent of the workers of the trust Severtruboprovodstroi in 1975.²⁰

The high rate of out-migration was caused also by the school graduates leaving for studying in higher educational establishments, by the young men's levy to

¹⁷ Starovoitov (1991), p.9.

¹⁸ TsGANKh, f.70, op.1, d.1021, l.128.

¹⁹ TsGANKh, f.70, op.1, d.2739, l.179.

²⁰ Alexeev, Logunov and Shabanov (1987), p.104.

military service, by the people released from the places of imprisonment, as well as a rapid migration of the rural population to the new towns in the Tyumen North. The out-migration had reached its peak in 1983-1987, which was an indication of the increasing crisis in the growth of oil-and-gas complex. However, it was not adequately assessed by the official state institutions. The out-migration actually reflected the degree of social tension in the region. This is one more argument for the necessity of a profound account of demographic consequences of the «fight» for Siberian oil and gas.

For the forth, the amount of in- and out-migration had formed the specific characteristics of increase in population. Its absolute estimates stably increasing in the 1960s-1970s, got an additional strong impetus from the beginning of the 1980s. Only in 1981-1986 the mechanical (i.e. migration) net increase in population of the Tyumen province had reached 654.1 thousand subjects, which exceeded the total migration increase over the preceding 15 years (see table 1). As a result, it was the migration increase which played the

leading role in the formation of the region's population throughout the whole of the period under discussion. In 1966 it was 85.5 percent of the increase of the number population of the Tyumen province, in 1970 - 90.2 percent, in 1980 - 90.6 percent.²¹ The proportion was typical for many regions of a new industrial development, proving thus the thesis of the decisive effect of migrations on the structure of the population of the North.

High level of migration intensity had shaped a specific situation illustrated by table 7. In fact, the whole region proved to be populated by migrants, more than half of which resided there over 5 years. The results of migrations are especially noticeable in the northern autonomous okrugs. According to the data of the Institute of Economy and Organization of Industrial Production (Siberian Branch of the Russian Academy of Sciences), 55-70 percent of the population of urban settlements of the North are changed within 2-3 years.²² In 1989 merely 27.5 percent of the

²¹ Current files of Tyumen regional department of statistics.

²² Luzin (1992), p.15.

Table 7

Time of permanent residence in the Tyumen
province in 1990, percent

Region	less than 5	6-9	10-14	15-18	20 and more
Tyumen province on the whole	43.7	17.6	11.9	7.5	19.3
Khanty-Mansiyskii okrug	52.8	21.2	12.0	6.4	7.6
Yamalo-Nenetskii okrug	59.8	20.9	8.9	3.7	6.7
Southern districts of the province	29.0	12.7	12.8	9.9	35.6

Source: O raspredelenii naseleniya po prodolzhitel'nosti
prozhivaniya v meste postoyannogo zhitel'stva.
Tyumen, 1990, pp.8, 10, 12, 14.

population of Khanty-Mansiyskii okrug and 24.1 percent of Yamalo-Nenetskii okrug were born in the Tyumen province (in the whole Tyumen province - 46.0 percent, in particular in its southern part - 72.2 percent).²³ This is quite a vivid example from the field of demographic history.

It, however, essentially complicates the analysis of the structure of the region's population and identification of the regularities of its change. Actually, it suffered maximal loads during minimal chronological intervals due to the intensity of migrations, which led to considerable demographic disproportions. The role and influence of reproductional processes (i.e. growth of population based on birth and death rates only) subjected to modelling and description by means of demography as a science, proved to be insignificant. In this light, the following interpretation of the demographic situation formulated at a scientific conference on the problems of social-economic growth of the North in

²³ Tschislennost' i sostav naseleniya Tyumenskoi oblasti (1990), p.48,52.

1991 seems to be quite exact:

«an intensive migratory exchange of massive international floods of manpower having lost the skills of settled cultural life had shaped a human massive with badly studied destructive properties.»²⁴

I will discuss the problem below, but now it must be noted that it appeared mainly as an effect of migrations on the structure of the population of the Tyumen North.

2.4. POPULATION GROWTH.

The analysis of the influence of migration on the composition and structure of the population includes consecutive characterization of the effects of migrational processes on the population's number, location, sex, age and national structure, employment as well as the dynamics of reproductional processes. Although these processes played a subordinate role in the formation of the region's population, they built the potential of demographic growth. With reduction of in-migration from the end of the 1980s, implementation

²⁴ Alexeev, Artyomov, Dubnov, Lamin, and Logunov (1991), p.7.

of this potential would supply the basis for further growth of labor force in the Tyumen North.

In-migrations promoted unprecedented increase in the region's population (see table 8). Such a pace has no analogues in the Russian and world practice of economic development of such large territories (the Tyumen province has 1,435.2 thousand square km or 8.4 percent of the territory of the Russian Federation).²⁵ Over three decades after the discovery of the deposits of hydrocarbon inputs the population has increased here by 2,005.6 thousand subjects or 2.8 times, meanwhile in the West Siberian economic region this increase was only 33.7 percent, in Russia on the whole - 25.4 percent.²⁶

These considerable changes were based on the increase which was the result of in-migration. The role of in-migration grew significantly with the outset of industrial development of oil deposits in 1964. The following illustrates the point. In 1963 the share of net migration in the increase of the

²⁵ Narodnoe khozyaistvo SSSR za 70 let (1988), pp.389,391.

²⁶ Narodnoe khozyaistvo Tyumenskoi oblasti... (1970), p.7;
Tschislennost' nasekeniya RSFSR (1990), p.245.

Table 8

Population of the Tyumen province according
to the data of all-Russian censuses, thousands

Years	Total	Khanty- Mansiyskii okrug	Yamalo- Nenetskii okrug	Share of okrugs' population, percent
1959	1,092.1	123.9	62.3	17.1
1970	1,405.1	270.8	81.2	25.1
1979	1,885.2	570.8	158.8	38.1
1989	3,097.7	1,282.4	494.8	57.4

Source: Itogi Vsesoyuznoi perepisi naseleniya 1959 goda. RSFSR. M., 1963, p.23; Narodnoe khozyaistvo Tyumenskoi oblasti v gody vos'moi pyatiletki. Tyumen, 1971, pp.69-71; Tschislennost' naseleniya gorodov, raionov, poselkov gorodskogo tipa i krupnykh sel'skikh naselennykh punktov Tyumenskoi oblasti. Tyumen, 1980, pp.6, 10, 12; Tschislennost' naseleniya RSFSR po dannym Vsesoyuznoi perepisi naseleniya 1989 goda. M., 1990, p.36.

population of Nizhnevartovsk was 17 percent only, but in 1964 it reached 97 percent, and in 1965 - 96 percent. Afterwards its share naturally decreased. By the middle of the 1970s it provided for 84 percent of the total increase of population, in Surgut - 78, in Nefteyugansk - 79 percent.²⁷ Over 1966-1989 the net immigration into the Tyumen province had reached 1,418.4 thousand subjects. The number of the region's population had risen from 1,272.6 thousand on 1 January, 1966 to 3,134.4 thousand on 1 January, 1990.²⁸ The share of net migration in the total increase of population during this period - 1,861.8 thousand subjects - amounted to 76.2 percent.

The pace of the increase of population was a direct mirroring of the increase in the 1970s and particularly in the 1980s intensity of in-migration. In the 1960s the total increase of population of the Tyumen province amounted to 28.7 percent (in Western Siberia on the whole - 7.8 percent, in the Russian Federation - 0.7 percent), in 1970-1979 it was 34.1

²⁷ GATO, f.1112, op.1, d.2540, l.9; d.2721, l.11; d.2981, l.8; d.3370, l.34; d.3970, l.10.

²⁸ 'Tschislennost' naseleniya RSFSR... (1991), pp.28, 35-36.

percent (Western Siberia - 7.2, the Russian Federation - 5.8 percent), in 1980-1989 - 64.3 percent (Western Siberia - 15.7, the Russian Federation - 7.0 percent).²⁹ It is apparent that the higher pace of the increase of population of Western Siberian economic region was mainly determined just by the increase in the Tyumen province. Its absolute estimates of the 1970s - first half of the 1980s exceeded the aggregate increase of population of large Siberian administrative units - Omsk, Novosibirsk, Tomsk, Kemerovo provinces and Altai krai taken together.³⁰ In the 1970s the Tyumen province provided for 55.0 percent of the increase of population of Western Siberia, in the 1980s - 59.4 percent, for the period of 1959-1989 on the whole - 53.0 percent.³¹

2.5. CHANGE IN POPULATION DISTRIBUTION.

The distribution of in-migrants over the territory of the Tyumen province was uneven. The main places of migrants settling were the rapidly growing towns and

²⁹ Tschislennost' naseleniya RSFSR... (1991), pp.28, 35-36.

³⁰ Avdeev, Bot and Ptschelintsev (1985), p.18

³¹ Narodnoe Khozyaistvo SSSR za 70 let, p.377; Tyumenskaya oblast' v tsifrakh (1987), p.3; Pravda, 1989, April 29th.

settlements which emerged on the territory of Khanty-Mansiyskii and Yamalo-Nenetskii okrugs where there were abundant oil and gas deposits. From the mid-1960s the northern regions played the leading role in the migration exchange. At the beginning of the 1960s the share of the migrants settled in the north of the Tyumen province was 25 percent, by 1970 it had reached 47 percent of the total number of newcomers.³² The migration from southern, mainly agricultural areas to the northern ones with rapidly developing oil-and-gas complex had increased significantly.

In the 1970s this tendency was strengthening by continuation of the migration to the oil districts of Middle Priobye (the area of the Ob' river) as well as by the formation of a powerful gas-extracting complex in the Arctic area. In the 1970s the pace of peopling in Yamalo-Nenetskii autonomous okrug became equal to that of Khanty-Mansiyskii; in the 1980s it considerably exceeded it.

The analysis of the data of table 1 allows us to assert that the proportion of migrants settled in the

³² Misevich and Chudnova (1973), p.43.

oil-and-gas extracting regions was stably increasing up to the middle of the 1980s (42.4 percent in 1966, 46.8 in 1970, 52.7 in 1975, 72.0 in 1980, 73.4 percent in 1985). Despite the fact that simultaneously the share of out-migration from northern autonomous districts to the total amount of out-migration was also increasing (from 38.7 percent in 1966 to 66.8 percent in 1985), the contribution of in-migration in the Tyumen North to the total increase of the region's population was higher than the share of northern regions' out-migration.

Between 1966 and 1970 the share of net migration had raised from 52.8 to 96.1 percent; in the following five years it slightly decreased and had reached 101.5 percent in 1980. In fact, this meant that net migration of population in Khanty-Mansiyskii and Yamalo-Nenetskii autonomous okrugs not only dominated in the aggregate increase of total Tyumen province's population, but also compensated the out-migration from its southern part. By the end of the 1980s the proportion of net migration to the increase of the total population had slightly decreased - from 86.6

percent in 1985 to 75.0 percent in 1989, but on the whole within 1966-1989 it provided for 83.9 percent of the total increase of the Tyumen province's population.

As a result, essential changes took place in the territorial location of the region's population (see table 9). The growth of population of Khanty-Mansiyskii and Yamalo-Nenetskii autonomous okrugs was extremely high - over 1959-1989 it had increased 10.4 and 7.9 times respectively. Consequently, more than 57.4 percent of population were concentrated in the Tyumen North, whereas before the onset of the industrial development of hydrocarbon deposits fewer than 17.1 percent of the population was located there.

This shift in the location of the population had huge consequences for the region's socio-economic growth. It necessitated the creation of the living accommodations for hundreds of thousands of people in almost inaccessible, non-peopled regions of the North.

These measures included the construction of dwelling houses, arrangement of social and everyday infrastructure, transport network, building base and

Table 9

Urban and rural population of the Tyumen province

Years	Total	Urban population		Rural population	
		thousand	percent	thousand	percent
Tyumen province on the whole:					
1959	1,092.1	346.5	31.7	745.6	68.3
1970	1,405.1	687.7	49.0	717.7	51.0
1979	1,885.2	1,146.4	60.9	738.8	39.1
1989	3,097.7	2,360.6	76.2	737.1	23.8
Khanty-Mansiyskii autonomous okrug:					
1959	123.9	33.5	27.0	90.4	73.0
1970	270.8	170.0	62.8	100.8	37.2
1979	570.8	446.1	78.2	124.7	21.8
1989	1,282.4	1,166.3	91.0	116.1	9.0
Yamalo-Nenetskii autonomous okrug:					
1959	62.3	21.8	35.0	40.5	65.0
1970	81.0	34.9	43.0	46.3	57.0
1979	158.8	80.1	50.4	78.7	49.6
1989	494.8	385.6	77.9	109.2	22.1

Source: Itogi Vsesoyuznoi perepisi naseleniya 1959 goda. M., 1963, p.23; Narodnoe khozyaistvo Tyumenskoi oblasti za gody vos'moi pyatiletki. Tyumen, 1971, pp.72-74; Tyumenskaya oblast' v tsifrakh. 1981-1985 gody. Sverdlovsk, 1987, p.3; Tschislennost' naseleniya RSFSR po dannym Vsesoyuznoi perepisi naseleniya 1989 goda. M., 1990, pp.318, 321, 323.

so on. To completely solve these problems in a historically short period proved to be impossible. The attempts to control the in-migration through restrictions of entry into the polar regions, and practicing of specific calls for specialists as the principal form of employment in the conditions of the labour-consuming model of economic growth also failed. Eventually the accepted scheme of development of oil-and-gas resources, the main social element of which was wide peopling of previously non-populated districts, proved to be destroyed by unprecedented pace of increase of population.

As a result the Tyumen North, though it may seem paradoxical, became overpopulated. This troublesome tendency accentuated by the specialists as early as the beginning of the 1970s had a number of negative results. For instance, the processes of the territory's development had become more expensive, social problems could not be rationally resolved, which was aggravated by the severe natural and climatic conditions, there was high rate of out-migration, and the North was turned into a region

where a large-scale fluctuation of manpower went on. Only the unskilled part stayed there.³³ According to the data of the Institute of Economy and Organization of Industrial Production (Siberian Branch of the Russian Academy of Sciences), overpopulation in some parts of the Tyumen North amounted to 25-40 percent by the end the 1980s, which required no less than 15 bn roubles of extra investments into social and everyday infrastructure that however failed to improve its functioning. The overpopulation of the North may be characterized with unequal migratory exchange that substituted the most skilled and prepared personnel by migrants lacking the required qualification.³⁴

The town-building calculations and plans elaborated at the beginning of the 1970s were uncompleted under the impact of non-controlled migration. Already in 1979 the number of Surgut population doubled that implied by the general plan of its growth, the population of Nizhnevartovsk was three times larger.³⁵ Considerable disproportion

³³ Luzin and Pozdnyakov (1991), p.87.

³⁴ Starovoitov (1991), pp.8-9.

³⁵ Ananiev and Silin (1984), p.96.

between the growth of oil-and-gas extracting production and social and everyday infrastructure, catastrophic lack of dwelling houses, absence of elementary living conditions, all these circumstances stimulated the out-migration from the the Tyumen North.

It may be inferred that the mass migration into the region, shift in population's location towards the northern unpopulated districts apart from constructive nature (i.e. creation of new branches, formation of their staff potential, increase in the extraction of hydrocarbon raw materials, etc.) had also an obvious destructive nature. In specific historical conditions of the development of the Tyumen North it appeared impossible to optimize the rate of migrations from the standpoint of its sufficing for the formation of a full-value staff potential. Only at the end of the 1980s there was a decreasing necessity for personnel for the establishments of the oil-and-gas complex (in 1989-1990 it was estimated that there was a 1-2 percent increase in the average annual number of employees, whereas in the middle of the 1980s it was

18-20 percent).³⁶ However, a complete solution of this problem will evidently require considerable time and large expense.

2.6. URBANIZATION AND GROWTH OF URBAN POPULATION.

The focused industrial development of the region's oil-and-gas resources and the town-building practice in the Tyumen North consisting of new settlements near large deposits predetermined the concentration of the population in the new towns and settlements. In 1959 in Khanty-Mansiyskii autonomous okrug there was the only town, the okrug centre with a population of 20.7 thousand and three settlements of an urban type - Beryozovo (6.8 thousand), Surgut (6.0 thousand), Oktyabrskii (3.8 thousand). The 1970 census of population showed three new towns, Surgut (34.0 thousand), Urai (17.4 thousand), and Nefteyugansk (19.7 thousand), and 12 new settlements of an urban type had emerged there.³⁷

The main stream of in-migration was directed towards this very area. The pace of the increase was

³⁶ Starovoitov (1991), p.9.

³⁷ Itogi Vsesoyuznoi perepisi naseleniya...(1963), pp.46, 54, 192; Narodnoe khozyaistvo Tyumenskoi oblasti...(1970), pp.49, 70.

the highest in the towns. For instance, 1,072 subjects resided in Urai at the time of discovery of the Shaim group of oil deposits in 1960. After this the number of population annually increased 2-2.5 times, amounting at the beginning of 1965 to 7.9 thousand. After the transition to year-around exploitation of the deposits in 1966, the population there reached 17.7 thousand.³⁸

The population of Nefteyugansk had increased from 808 subjects in 1962 to 9.8 thousand at the end of 1965; of Nizhnevartovsk - from 1.6 to 11 thousand.³⁹ Surgut was given the status of a city in 1965, and by 1970 its population had increased by 20 thousand subjects and numbered 37.5 thousand.⁴⁰

In the 1960s, the growth of the oil and gas industry had shaped the large population centers. They attracted migrants throughout the period of the 1970s-1980s. In those areas located near oil and gas deposits or along oil-and-gas pipelines the increase in population equaled the pace of the new towns.

³⁸ GATO, f.1112, op.1, d.2449, l.99,106; d.2725, l.91; d.2987, l.87-88.

³⁹ GATO, f.1112, op.1, d.2987, l.84,87-88; d.3377, l.102,105.

⁴⁰ GATO, f.113, op.24, d.30, l.61.

In the settlement of Igrim which was selected as the base for development of the Beryozovo-Igrim group of gas deposits, the total population had increased from 0.9 thousand in 1959 to 7.0 thousand in 1968. In the period between the censuses of population of 1959 and 1979 the settlement of Megion had turned from a small settlement with 300 residents into a kind of satellite of Nizhnevartovsk with a population of 6.4 thousand. The situation in the settlements not related with the growth of oil-and-gas industry was different. For example, the population of Beryozovo had decreased in the period of 1959-1970 from 7.0 to 6.2 thousand, that of the settlement of Oktyabrskii remained unchanged around 3.8 thousand.⁴¹

Rapid growth of population was typical in established towns as well. In 1972 in Nadym where the Medvezhye deposit and a system of gas pipelines to the Urals were already exploited, the population was about 8 thousand subjects. By the end of 1974 the number of residents there reached 25.3 thousand, i.e. it had

⁴¹ TsGARE, f.5470, op.29, d.2306, l.28; Narodnoe khozyaistvo Tyumenskoi oblasti...(1970), p.71.

increased more than three times.⁴² An exclusive example in the demographic history of the region is supplied by the two largest cities of Middle Priobye - Surgut and Nizhnevartovsk. In 1980 their population numbered already 137 and 134 thousand respectively, which considerably exceeded the initial town-building calculations.⁴³ Moreover, in the 1980s the migration of new settlers, together with a rather high level of natural increase, promoted almost a doubling in the number of residents. At the beginning of 1990 the population of Surgut numbered 255.8 thousand, that of Nizhnevartovsk - 246.0 thousand.⁴⁴

In Yamalo-Nenetskii okrug the growth of towns was also intensive. In 1959, apart from Salekhard with the population of 16.6 thousand, the only urban settlement was Labytnangi. In 1989 the population of Nadym had reached 53.1 thousand, of Novy Urengoi - 94.6, of Noyabr'sk - 119.7 thousand.⁴⁵ In total 17 new towns and about 50 smaller new urban settlements emerged in the

⁴² TsGARF, f.5470, op.29, d.3276, l.174; d.4200, l.31.

⁴³ Narodnoe khozyaistvo RSFSR v 1980 gody, pp.10-11.

⁴⁴ Tschislennost' naseleniya RSFSR...(1990), p.247.

⁴⁵ Itogi Vsesoyuznoi perepisi naseleniya...(1963), p.193; Tschislennost' naseleniya RSFSR...(1990), p.250.

Tyumen province during the period of development of oil and gas deposits.⁴⁶

The migration of new settlers to the towns of the Tyumen North particularly intensified in the 1980s. In 1970, 64.4 percent of migrants became town residents, in 1980 - 72.2 percent, in 1989 - 76.3 percent. In 1975 the town-dwellers' share in the annual increase of the region's population was 80.3 percent, in 1980 - 88.9, in 1985 - 90.1 percent.

In 1989 migration increase in the population of the Tyumen province was entirely provided by the increase in the number of town-dwellers as the rural population decreased.⁴⁷

The urban nature of migrations of the 1960s-1980s had radically changed the proportion between the urban and rural population of the region (see table 9). The share of town-dwellers, being less than one third in 1959 exceeded three quarters of the total population by the 1980s. The processes of urbanization were most intensive in the districts of oil-and-gas extraction.

⁴⁶ Pashkov (1988), p.25.

⁴⁷ Tyumenskaya oblast' v tsifrakh za 1986-1989 gody, p.21.

It must be noted that the number of town-dwellers had increased there 34.8 times, while the total increase of the population of Khanty-Mansiyskii okrug was 10.4 times. In Yamalo-Nenetskii okrug these figures were 17.7 and 7.9 times respectively. In terms of the achieved rate of urbanization in the Russian Federation Khanty-Mansiyskii okrug was inferior only to the Murmansk province in the north-western part of the European Russia, outpacing thus many other industrial regions, such as the Central region, Urals, Kuzbass and others.⁴⁸

2.7. HOUSING, INFRASTRUCTURE AND OUT-MIGRATION.

As it was pointed out above, the in-migration to the towns had both positive and negative consequences. The former include the formation and strengthening of specific urban elements in the mode of life of the residents of the North, with higher standards of organization of public services, development of all the components of social and everyday infrastructure in comparison with rural settlements. On the other hand, under the conditions of pioneering development

⁴⁸ Demograficheskii ezhegodnik SSSR (1991), p.145, 160, 172.

of previously not settled regions the non-controlled increase of urban population led to an unprecedented increase of load on social, everyday and cultural infrastructure of the towns and settlements, which entailed sharp social problems.

In 1964 there were 115 flats and 230 square m of hostels per every thousand oilmen. Provision of oilmen with dwelling space in 1966 did not exceed 1.8 sq m per person.⁴⁹ In Surgut, Nefteyugansk, and Urai there were frequent interruptions of electric power and the water supply. In Nefteyugansk there were over 100 residents for each seat in a canteen. In Surgut there were 147 purchasers per 1 sq m of space in the grocery stores.⁵⁰ The building of housing and social and cultural services were overwhelmed by the influx of new settlers. In Novy Urengoi in 1980 the provision of gas extractors with dwellings did not exceed 0.54 square m (!) per person.⁵¹

The peak of disproportion as a rule took place in the first years of the towns' existence. However,

⁴⁹ GATO, f.124, op.184, d.3, l.92; AGTNG, op.3, d.4, l.79-80, 368.

⁵⁰ GATO, f.113, op.19, d.2, l.24; AGTNG, op.4, d.32a, l.66, 93.

⁵¹ Pilipenko (1983), p.76.

later on the situation changed insignificantly. Thus, in 1982 in Nizhnevartovsk 18.3 percent of oilmen and their families lived in temporary dwellings without modern conveniences (in railway cars, barracks, and so-called «balok»), in Surgut their share was equal to 34.5 percent of the total population, in Noyabrsk - 33.2 percent.⁵²

In general, it should be emphasized that it was social-cultural infrastructure which was to become the greatest problem generated by the Soviet strategy of development of the North. Since the very beginning of the formation of social-cultural infrastructure an obvious priority was given to production investments and current production needs rather than to the «human factor.» Neglecting this was the norm for the Soviet government seeking to overcome the country's economic backwardness and to increase its military power. For this purpose an intentional reduction of resources for non-production consumption took place. The losses of irrational utilization of production resources were also covered at the expense of neglecting a man's

⁵² Gaponova (1986), p.146.

requirements. The residual principle of financing the social sphere was carried out through a mechanism of strict centralization of both branch and territorial administration.

It was characterized by orientation towards an obligatory and unconditional fulfillment of the production program. In this scheme a man was treated as an ordinary production resource. As the social-everyday sphere competed with production in demand for investments and capacity of the construction base to increase production capacity, so this sphere was treated as an obstacle to the production program and was financed only after fulfillment of production plans of oil-and-gas extraction.

That's why manpower was attracted to the North in the simplest and most available way - by high wages. The corresponding expenses were not important for the enterprises, since they were compensated by price for their products. In doing so they did not subtract resources from the production program. The factor of time should be also considered. The social and

cultural infrastructure started forming in the Tyumen North only 30 years ago from nothing.

All this caused backwardness of the region's everyday and cultural infrastructure not only from the average estimates of the Russian Federation, but still more from fixed standards. Thus providing the northern population with housing by the end of the 1980s was only 65 percent complete, i.e. by 12 percent lower than the country's average estimate.⁵³ In the northern autonomous okrugs of the Tyumen province the situation was far worse. The rate of providing the population of the Tyumen North with dwellings was 15 percent lower than the republic's average rate and 10 percent lower than the average rate in southern regions of Siberia. The rate of providing health services was lower by 17 and 18 percent respectively, the rate of providing pre-school educational establishments was lower by 10 and 13 percent respectively, the rate of providing cultural objects was lower by 52 and 75 percent respectively.⁵⁴ Every eighth resident of the North of

⁵³ Luzin and Pozdnyakov (1991), p.85-86.

⁵⁴ Luzin (1992), pp.131-132.

Western Siberia lives in a barrack, car or «balok», which is 10 times as high as in Russia on the average.⁵⁵ Though in the region's large cities (Surgut, Nizhnevartovsk, Nadym, Novy Urengoi) housing in general is adequate to modern standards, in the majority of northern working settlements up to now barracks prevail, and communal-everyday and cultural services are primitive. The health services are in crisis state. More than one third of the medical establishments require capital renovation, half of the buildings have no hot water supply, and the problem with personnel is acute.⁵⁶

It must be noted that the degree of providing the population with objects of social and cultural life is estimated in light of the accepted Russian standards. They actually do not differ from the standards of the country's middle belt and are not related with the solution of the problem of creating normal living conditions in the North. It may be supposed that the true difference between the real requirements and

⁵⁵ Lamin, and Logunov (1992), p.11.

⁵⁶ Luzin (1992), p.132.

the degree of their satisfaction hardly may be expressed by the above-mentioned figures.

The bad conditions of the northern population's vital activities were not compensated for by the relatively high wage, since corresponding deliveries of goods had never been provided. In particular, the share of expenses for purchasing and payment for services in the wage of the population of the Tyumen North was half as much again as in the Russian Federation on average. Unsatisfied solvent demand towards income was several times higher here than in the Russian Federation on the average at the end of the 1980s.⁵⁷

The next group of social problems is related with the conditions of living activity as well as with the peculiarities of formation of the population of the Tyumen North. Such a situation had progressed that people who did not pass through a special selection, neither medical nor professional ones, came to the North. Often they were poorly acclimated to living in extreme natural-climatic conditions. The artificial

⁵⁷ Luzin and Pozdnyakov (1991), pp.85-86.

environment created by the social infrastructure also was inadequate for the natural-climatic conditions of the North. In combination with the first factor it negatively influenced the population's health, and affected its reproduction rate.

There are a number of causes for the most negative result of a spontaneous character of migration processes, the over-populating of the North. For the first, the absence of a distinct succession of exploitation of deposits resulted in a parallel development of several larger deposits without a deep profound preparation, and near each of the deposits a town sprang. As a result, for example, the North of the Tyumen province in fact lacks a single system of settling, but there are numerous poorly related towns and settlements with a closed, autarchic system of economy entirely tight to the exploitation cycle of a certain deposit. Lack of manpower in newly emerged settlements is not filled by the excess in towns linked with exhausted deposits. As a rule, it is filled by either an additional in-migration or by tour-on-duty or so-called «vakhtovyi» method.

For the second, the weak division of economic functions between the North and the South, and absence of co-operation between them under the conditions of departmental isolation, have created ineffective small productions and services which considerably reduces the efficiency of utilization of manpower and increases the demand for it.

For the third, the low rate of development of the social sphere caused the situation that the most skilled and educated groups of manpower very seldom stayed in the region. Lack of highly-skilled manpower was counterbalanced by the excess of low-skilled one. Thus, according to an investigation conducted in 1990, the share of migrants lacking necessary skills and education amounted to 35 percent of the total number of migrants arriving in Nizhnevartovsk and only 21 percent in the number of those who left the city, whereas the share of skilled workers, engineers and other specialists arriving in the city amounted to 58 percent but in the out-migration from it exceeded 72 percent.⁵⁸

⁵⁸ Luzin (1992), p.15.

The phase of decreasing extraction of many larger deposits and a sharp reduction of centralized investments in the 1980s-1990s meant a decrease in the demand for manpower. Thus, in 1989-1990 the annual increase in the number of the workers in Yamalo-Nenetskii autonomous okrug was slightly more than 2 percent, whereas in the middle of the 1980s it amounted to 18-20 percent a year.⁵⁹

A far more acute situation had shaped in the oil-extracting regions of Middle Priobye: in 1989-1990 the number of employees there was absolutely decreasing. As a result, by the middle of the 1990s the region actually proved to be a zone of mass unemployment with all the negative consequences of this. Analysis of the interaction of migrational processes with the rate of development of social and everyday infrastructure of the towns of the Tyumen North shows that it was this region that determined the high rates of out-migration of population during the whole of the period under discussion. According to the specialists' calculations two-thirds of new settlers left the region during

⁵⁹ Starovoitov (1991), p.16.

their first year of work.⁶⁰ Estimates of the intensity of out-migration reflect the mass nature of this phenomenon. In Surgut the out-migration amounted to 108.9 thousand per 198.2 thousand arrived there in 1966-1980. Over this period 204.7 thousand people arrived in Nizhnevartovsk and 96.4 thousand left it. For the city of Nefteyugansk the estimates of in-migration and out-migration were the following - 124.2 thousand arrivals and 78.7 thousand departures.⁶¹

Consequently, it is relevant to assert the destructive nature of the mass non-controlled migrational influx of population. The main cause of immense socio-economic losses was the mass character of in-migration and objective unpreparedness of the territory (first and foremost, by the rate and pace of the development of social and everyday infrastructure) to accommodate such a quantity of new settlers.

Taking into account the fact that accommodation of a person in the Tyumen North, including expenses for arrival, settling, inclusion into production process

⁶⁰ Kutzev (1982), p.193; Izvestiya, 1985, Sept. 16th.

⁶¹ Current files of Tyumen regional department of statistics.

and so on, cost the state on the average about 35 thousand roubles,⁶² the out-migration from the region during 1966-1989 was equal to the loss of 40-50 bn roubles, which is comparable to the amount of investment in the development of oil-and-gas complex within this period.

⁶² Salmanov (1985), p.10.

3. CHANGE IN POPULATION STRUCTURE.

Powerful migration pressure on the Tyumen North could not help but cause essential changes in the structure of its population. These changes had several directions, the most significant of which were related to the sex, age and ethnic structure of the population.

3.1. SEX COMPOSITION.

Under the extreme climatic conditions of the North the enterprises and associations of the oil-and-gas complex had an increased demand for men's labor. In the middle of the 1960s the proportion of women among those engaged in the region's oil industry did not exceed 35 percent, in the gas industry - 23 percent, in geology - 29 percent.¹ This situation considerably restricted the chances of employment for women and led to differences in the population's structure, the negative effects of which were repeatedly mentioned in research literature.²

¹ TSGARF, f.374, op.35, d.6671, l.114-115, 154.

² Armstrong, Rogers and Rowley (1976), p.53; Malinin and Ushakov (1976), p.38; Gaponova (1987), pp.76-77.

The specificity of oil-and-gas production related to the requirements of high skill, the mobile character of production process in combination with low standards of social and everyday life in new towns and settlements had predetermined a stable domination of males in migration streams. More than 60 percent of new settlers consisted of males by the second half of the 1960s; in the largest age group of migrants - 20-34 years - the share of males reached 68-70 percent.⁶⁵

As a result, already by the beginning of the 1970s males constituted the majority of the population of new towns and settlements of the Tyumen North. Their share had increased from 44.7 percent in 1959 to 47.1 in 1970 in the Tyumen province in general, from 46.9 percent to 50.4 percent in Khanty-Mansiyskii okrug, from 47.7 percent to 51.3 percent in Yamalo-Nenetskii okrug.⁶⁶ In Surgut, one of the centers of the oil industry and given the status of a town in 1965, the proportion of males had reached 54.1 percent in 1970,

⁶⁵ Misevich and Chudnova (1973), p.76.

⁶⁶ Itogi Vsesoyuznoi perepisi naseleniya... (1963), pp.190-193; Narodnoe khozyaistvo Tyumenskoi oblasti... (1971), pp.76-78.

whereas according to the census of 1959 it did not exceed 45.0 percent.⁶⁷

The changes occurring in the age group of 25-39 years were especially noticeable. A specific selectional investigation made by the specialists of the Institute of Economy and Organization of Industrial Production showed that in 1967 in Nefteyugansk there were 55 females per 100 males of the age of 25-29 years, 59 females per 100 males of 30-34 years, 64 females per 100 males of 35-39 years.⁶⁸ The share of males in the Tyumen province on the whole was 47.8 percent in 1970, as regards the age group of 25-29 years it was 54.6 percent, 30-34 years - 53.5 percent, 35-39 years - 52.7 percent.⁶⁹

In the 1970s the difference between the male and female population of the Tyumen North went on increasing. Growth of the demand in the oil-and-gas complex for manpower, the field of female labor being restricted, promoted males' prominence in the

⁶⁷ Itogi Vsesoyuznoi perepisi naseleniya...(1963), p.193;
Narodnoe khozyaistvo Tyumenskoi oblasti...(1971), p.78.

⁶⁸ Malinin and Ushakov (1976), p.38.

⁶⁹ Narodnoe khozyaistvo Tyumenskoi oblasti...(1971), p.85.

composition of in-migration into the region. During the period between the censuses of 1959 and 1979 the number of males in Khanty-Mansiyskii autonomous okrug had increased 5.1 times, of females - 4.1 times, while the total increase of population was 4.6 times. In Yamalo-Nenetskii okrug these estimates were 2.9, 2.2, 2.5 times respectively.⁷⁰ As a result, the ratio of males had increased from 46.9 percent to 53.2 percent in Khanty-Mansiyskii okrug, from 48.2 percent to 53.5 percent in Yamalo-Nenetskii okrug (see table 10).

In 1979 in Khanty-Mansiyskii autonomous okrug per every 100 males aged 20-24 there were 86 females of this age, in Yamalo-Nenetskii okrug - 80 females; per 100 males aged 25-29 - 78 and 75 females respectively; 30-34 years - 80 and 77; 35-39 years - 81 and 72.⁷¹ Considering that the age group of 20-39 years constituted approximately half of the population in the regions of oil-and-gas extraction, the negative consequences of this proportion were rather significant.

⁷⁰ Itogi Vsesoyuznoi perepisi naseleniya... (1980), pp.98-99, 147-148.

⁷¹ Ibid.

Table 10

Sex and age composition of population in
autonomous okrugs of the Tyumen province,
percent

Age groups	Khanty-Mansiyskii okrug					
	males			females		
	1959	1979	1989	1959	1979	1989
0-9	51.2	50.7	50.9	48.8	49.3	49.1
10-19	51.5	49.3	49.7	48.5	50.7	50.3
20-24	49.3	53.9	52.2	50.7	46.1	47.8
25-29	52.0	56.1	53.2	48.0	43.9	46.8
30-34	45.8	55.6	53.1	54.2	44.4	46.9
35-39	38.7	55.3	52.9	61.3	44.7	47.1
40-44	37.4	56.0	53.1	62.6	44.0	46.9
45-49	40.6	54.0	52.2	59.4	46.0	47.8
50-54	38.7	46.8	51.5	61.3	53.2	48.5
55-59	34.0	39.7	48.6	66.0	60.3	51.4
60 +	34.6	24.3	29.3	65.4	75.7	70.7
Total	46.9	52.2	51.3	53.1	47.8	48.7

(continued)

Table 10 (continued)

Sex and age composition of population in
autonomous okrugs of the Tyumen province,
percent

Age groups	Yamalo-Nenetskii okrug					
	males			females		
	1959	1979	1989	1959	1979	1989
0-9	50.7	50.7	50.7	49.3	49.3	49.3
10-19	50.0	50.5	49.8	50.0	49.5	50.2
20-24	47.2	55.5	52.0	52.8	44.5	48.0
25-29	52.1	57.2	54.8	47.9	42.8	45.2
30-34	47.9	56.3	53.8	52.1	43.7	46.2
35-39	42.4	58.2	53.8	57.6	41.8	46.2
40-44	43.1	58.4	54.2	56.9	41.6	45.8
45-49	44.6	54.8	55.1	55.4	45.2	44.9
50-54	44.1	47.9	54.9	55.9	52.1	45.1
55-59	38.9	41.8	52.1	61.1	58.2	47.9
60 +	37.2	32.2	33.6	62.8	67.8	66.4
Total	48.2	53.5	52.4	51.8	46.5	47.6

Source: Itogi Vsesoyuznoi perepisi naseleniya 1959 goda. RSFSR. M., 1963, pp.70-71; Itogi Vsesoyuznoi perepisi naseleniya 1989 goda. Raspredelenie naseleniya po polu i vozrastu. Ch.2. Khanty-Mansiyskii i Yamalo-Nenetskii avtonomnye okruga. Tyumen, 1990, pp.12-13, 138-139; Vozrastnoi sostav naseleniya RSFSR po dannym Vsesoyuznoi perepisi naseleniya 1989 goda. M., 1990, pp.296, 299.

These consequences were manifested in transformation of demographic behaviour characterized by impossibility to create a full-value family (according to the data of the census of population of 1979 only in the northern okrugs of the Tyumen province the number of unmarried males had reached 39.8 thousand subjects, i.e. 10.4 percent of male population of the okrugs).⁷² These negative consequences also promoted the formation of deviant behaviour in everyday life; aggravated criminal situation; and eventually they affected permanent settling of people and stabilization of basic branches of the oil-and-gas complex leading to out-migration.

The data of table 10 show that in 1979 the proportion of males considerably exceeded that of females for all age groups from 20 to 49 years in the population of the Tyumen North. In many towns and settlements the difference was even greater. Thus, in the settlement of Pangody situated at the largest gas deposit Medvezhye there were 60.2 percent of males, in

⁷² Itogi Vsesoyuznoi perepisi naseleniya 1989 goda. Raspredelenie naseleniya po tschislui razmeru semei. (1990), pp.6-7.

the settlement of Novy Urengoi - 63.1 percent, in the settlement of Noyabr'skii (the future oilers' town of Noyabr'sk) - 70.4 percent.⁷³

In the 1980s large-scale development of the infrastructure in new towns and settlements of the Tyumen North, expansion of assistant and subsidiary productions in the field of oil-and-gas complex as well as the growth of its technical equipment stimulated an influx of females to the region. Between the censuses of 1979 and 1989 their number had increased in the towns and settlements of Khanty-Mansiyskii okrug 2.7 times, in those of Yamalo-Nenetskii okrug 4.8 times which exceeded respective male estimates.⁷⁴ This promoted evening of the shaped disproportion in the gender composition of the population. As shown in table 10 the proportion of females had increased in almost all age groups of the population of the Tyumen North.

However, domination of males remained and was especially apparent in the age interval 25-49 years,

⁷³ Tschislennost' naseleniya gorodov, raionov, poselkov...(1980), p.12.

⁷⁴ Vozrastnoi sostav naseleniya RSFSR...(1990), pp.297, 300.

which went on influencing the structure of families, pace of reproduction of the population and development of demographic processes in the region in general. For instance, in the towns and settlements of Yamalo-Nenetskii okrug there were 85 females per every 100 males of 25-29 years in 1989, 84 females per 100 males of 30-34 years, 87 females per 100 males of 35-39 years.⁷⁵ The number of unmarried males in Khanty-Mansiyskii okrug reached 55.2 thousand in 1989, in Yamalo-Nenetskii okrug - 21.1 thousand, or 8.4 percent and 8.1 percent respectively. According to the 1989 census, 70.8 percent of all unmarried subjects were males.⁷⁶

Below we will examine the proceeding of these processes in the largest towns of the Tyumen North (see table 11). The common tendency was reduction of the proportion of males in all age groups from 20 to 49 years. By the end of the 1970s the disproportion was rather acute. There were 78 females per every 100

⁷⁵ Itogi Vsesoyuznoi perepisi naseleniya 1989 goda. Raspredelenie naseleniya po polu i vozrastu. Ch.2. (1990), p.141.

⁷⁶ Itogi Vsesoyuznoi perepisi naseleniya 1989 goda. Raspredelenie naseleniya po tschislu i razmeru semei. (1990), pp.6-7.

Table 11

Share of males in the main cities of the Tyumen North, percent

Age	Surgut		Nizhnevartovsk		Nefteyugansk		Nadym		Urengoi	
	1979	1989	1979	1989	1979	1989	1979	1989	1979	1989
0-9	49.7	51.2	50.8	51.0	50.5	51.7	51.7	49.7	53.0	50.6
10-19	48.5	49.8	48.5	49.1	49.0	48.5	51.0	49.8	51.8	50.4
20-24	54.5	49.7	54.3	55.7	55.6	54.8	50.8	49.0	62.5	48.1
25-29	56.1	51.5	56.3	53.1	56.8	52.5	50.5	53.3	63.5	53.7
30-34	54.5	51.8	56.1	52.3	54.3	52.4	50.1	51.6	66.1	53.8
35-39	55.8	51.3	55.7	52.3	55.0	51.4	55.4	50.1	70.1	53.5
40-44	57.5	51.3	58.1	52.5	56.1	50.1	57.0	50.5	70.1	55.3
45-49	56.4	51.0	57.8	52.0	55.9	50.8	59.3	53.2	75.6	58.1
50-54	48.5	51.0	50.0	52.1	49.3	50.8	53.8	54.6	63.0	58.6
55-59	44.6	48.2	45.5	48.8	42.9	49.9	47.9	56.6	70.7	60.5
60 +	21.6	29.2	23.4	28.0	21.7	29.6	21.1	35.2	40.0	37.8
Total	52.7	50.4	53.4	51.4	53.0	51.0	52.3	50.9	63.1	52.6

Source: Itogi Vsesoyuznoi perepisi naseleniya 1989 goda. Raspredelenie naseleniya po polu i vozrastu. Khanty-Mansiyskii i Yamalo-Nenetskii avtonomnye okruga. Tyumen, 1990, pp.42-43, 47-48, 53-54, 158-159, 162-163, 183.

males of 25-29 years in Surgut and Nizhnevartovsk, 76 in Nefteyugansk, 57 in Novy Urengoi and only in Nadym the proportion was approximately equal.⁷⁷ According to the data of the 1989 census, the proportion of males and females changed, and the negative influence of above mentioned disproportion decreased. There were only few exceptions (i.e. the group of 25-29 years in Nizhnevartovsk, Nefteyugansk, and Nadym). Slow pace of change in the sex composition of the population was typical for the city of Novy Urengoi. The population there was formed in the 1980s and had increased 11.0 times over the period between two censuses.⁷⁸

Remarkable also is the fact that the proportion of males and females in elder age groups had essentially evened over the 1980s. This is one of the characteristic trends of the demographic situation in the developed regions.

Thus a considerable domination of males in the structure of the population of the areas of oil-and-gas extractions was a distinctive feature of the first

⁷⁷ Tschislennost' naseleniya gorodov, raionov, poselkov... (1980), p.12.

⁷⁸ Tschislennost' naseleniya RSFSR... (1990), p.37.

stages of development of the territory and formation of its population. Migration at the following stages of production, and better social and everyday infrastructure of new towns and settlements resulted in increasing involvement of women to the field of basic production as well as in assistant branches. Their proportion in the workers of oil-and-gas industry, construction, and geological survey had reached 40-45 percent, in the branches of social and everyday infrastructure - 90-95 percent.⁷⁹ For example, in the middle of the 1980s females constituted 52.3 percent of engineering staff of oil-and-gas construction, 52.7 percent of that of gas industry.⁸⁰

3.2. AGE COMPOSITION.

From the beginning of the industrial development of Tyumen hydrocarbon resources, apart from the specialists from the country's oil-extracting regions, the youth went to the Tyumen North. In autumn 1964 more than 2 thousand males in the reserve of the

⁷⁹ Alexeev and Logunov (1990), p.142.

⁸⁰ AGTGP, op.1, d.1500, l.8, 33; Alexeev, Logunov and Shabanov (1987), p.77; Pravda Severa, 1987, Aug. 4th.

Soviet Army arrived in the Tyumen province.⁸¹ In 1965-1967 the region received more than 11 thousand young men and women arrived after Komsomol (Young Communist League) passes.⁸² By the beginning of the 1970s the proportion of youth under 30 years was 46.4 percent in the oil industry, 56.2 percent in the gas industry.⁸³

According to the data of K.N.Misevich and V.I.Chudnova the age structure of in-migration into the towns and settlements of the Tyumen North was in 1965 as follows: under 15 years - 15.8 percent, 16-19 years - 8.3 percent, 20-24 years - 12.3 percent, 25-29 years - 24.9 percent, 30-34 years - 14.0 percent, 35-39 years - 12.3 percent, 40-44 years - 5.2 percent. The share of the other age groups was merely 7.2 percent.⁸⁴ Two thirds of the increase in population were provided by the migrants of 20-39 years. The analysis of the composition of migration streams into the region in the second half of the 1960s to the middle of the 1980s shows that the ratio of migrants

⁸¹ GATO, f.124, op.179, d.57, l.180.

⁸² GATO, f.1444, op.32, d.21, l.19.

⁸³ TsGANKh, f.70, op.1. d.2540, l.8; GATO, f.2101, op.1, d.194, l.1, 7.

⁸⁴ Misevich and Chudnova (1973), pp.75-76.

aged 20-30 years was 62.5-64 percent, and according to some estimations it was up to 70 percent.⁸⁵

The data from 1986-1989 presented in table 12 testify to the same. Moreover, they reveal the influence of migrations on the age structure, i.e. the proportion of age groups in the intervals of 0-15 and 20-29 years was, as a rule, essentially higher in the net increase of population than that in the age composition of new settlers. For other age groups the opposite regularly took place in 1986-1989, out-migration instead of an increase took place in 1986 in the group of 55-59 years, in 1987 in the group over 50 years, in 1988 in the groups of 16-19 and over 45 years, in 1989 in groups of 35-39.

Under the impact of these changes, the obvious domination of young age groups was shaping in-migration to the Tyumen North, differing from the country's already developed regions (see table 13). The analysis of changes fixed by the censuses of 1959, 1970, 1979 and 1989 allows us to distinguish a number of circumstances characterizing the content and

⁸⁵ Gaponova (1987), p.76: Ananiev and Silin (1984), p.94.

Table 12

Age composition of migrants in the Tyumen province in 1986-89, percent

Age group	In-migrants on the whole				Net migration			
	1986	1987	1988	1989	1986	1987	1988	1989
0-15	17.4	17.8	21.5	20.4	20.0	28.9	33.7	28.4
16-19	6.8	9.7	8.9	10.8	2.1	6.0	-	6.0
20-24	23.3	22.4	20.6	22.1	29.1	32.0	39.2	52.1
25-29	19.5	17.7	17.1	16.0	20.8	14.3	14.3	11.7
30-34	12.3	11.1	11.2	10.5	12.1	8.8	6.3	0.1
35-39	8.0	7.5	7.6	6.9	7.6	6.5	4.7	-
40-44	3.2	3.4	3.8	3.9	2.8	3.2	1.8	-
45-49	4.2	3.6	2.9	2.2	3.4	1.3	-	-
50-54	1.9	2.1	2.3	2.4	1.0	-	-	-
55-59	1.2	1.4	1.2	1.3	-	-	-	-
60 +	2.2	3.3	2.9	3.5	0.4	-	-	1.7

Source: Estestvennoe i mekhanicheskoe dvizhenie naseleniya Tyumenskoi oblasti za 1986-1987 gody. Tyumen, 1988, p.48; Estestvennoe dvizhenie i migratsiya naseleniya Tyumenskoi oblasti za 1986-1989 gody. Tyumen, 1990, p.99.

Table 13

Age composition of population of the Tyumen province, percent

Age groups	Tyumen province on the whole				Khanty-Mansiyskii okrug				Yamalo-Nenetskii okrug			
	1959	1970	1979	1989	1959	1970	1979	1989	1959	1970	1979	1989
0-9	26.2	19.8	17.7	20.9	28.5	22.3	20.1	23.3	27.5	22.7	19.6	21.5
10-19	14.6	21.2	16.4	14.2	14.4	19.1	13.8	13.5	14.1	19.1	14.7	13.7
20-24	9.5	7.7	11.6	7.4	10.0	8.1	12.6	7.5	10.9	8.8	12.2	7.4
25-29	9.1	5.9	11.8	12.1	10.4	8.8	15.5	14.0	10.4	8.2	15.2	14.5
30-34	9.1	9.6	7.0	11.7	10.1	13.0	9.2	13.4	10.4	11.3	9.9	13.8
35-39	5.1	7.3	6.5	9.6	5.2	8.5	8.0	10.4	5.8	7.7	8.5	11.2
40-44	4.9	7.8	7.4	5.2	4.8	7.7	8.0	5.4	5.0	7.4	7.8	6.2
45-49	5.2	4.4	5.7	4.5	4.5	3.7	4.9	4.3	4.3	4.3	4.5	4.5
50-54	4.4	3.5	5.3	4.6	3.7	2.4	3.9	3.8	3.6	3.0	3.6	3.5
55-59	3.6	3.9	2.7	3.1	2.8	2.5	1.5	1.9	2.5	2.6	1.5	1.3
60 +	8.3	8.9	7.9	6.7	5.6	3.9	2.5	2.5	5.5	4.9	2.5	1.4

Source: Itogi Vsesoyuznoi perepisi naseleniya 1959 goda. RSFSR. M., 1963, pp.70-71; Itogi Vsesoyuznoi perepisi naseleniya 1970 goda. Tom 2. Pol, vozrast i sostoyanie v brake naseleniya SSSR, soyuznykh i avtonomnykh respublik, kraev i oblastei. M., 1972, pp.139-141; Vozrastnoi sostav naseleniya RSFSR po dannym Vsesoyuznoi perepisi naseleniya 1989 g. M., 1990, pp.293-299.

dynamics of the interaction of migration processes and age structure of the population.

For the first, before starting industrial development of oil-and-gas deposits the distribution of the population of the Tyumen North among age groups actually agreed with general regional estimates, though young groups were generally better represented. Thus, the ratio of the group of 20-39 years was 32.8 percent in the region, while in Khanty-Mansiyskii okrug it reached 35.7 percent, in Yamalo-Nenetskii okrug - 37.5 percent. On the whole the age structure of the population vividly demonstrated demographic consequences of World War II - lacking in the group of 10-19 years and relatively low numbers in the group of military age of war time.

For the second, throughout the 1960s, despite the above-mentioned considerable influx of youth, a major increase was typical for the groups from 30 to 44 years. The total increase of population of the Tyumen province was 128.8 percent, while the increase in the group of 30-34 years was 136.4 percent, 35-39 years - 185.2 percent, the group of 40-44 years had doubled.

This had direct effects on the change of the proportion of these groups which as shown in the census of 1970. At the same time, the proportion of the group of 10-19 years had considerably increased which was evidently caused by transfer of representatives of the group of 0-9 years into this group, the group of 0-9 years having low migration mobility.

The proportion of the population aged 20-29 years was reduced everywhere. At first sight, it seems to contradict the above-mentioned data on the age composition of migrants. However, a more thorough analysis shows that it is not so.

As already noticed, migration to the Tyumen North was based on staff requirements of the oil-and-gas complex. The peculiarity of a staff policy of the 1960s was orientation towards the attraction of first and foremost skilled personnel having experience in working in oil-and-gas extracting production, geological survey, and construction. The primary character of creation of the basic production structures of oil-and-gas complex towards assistant

ones necessitated to concentrate here highly skilled workers and engineering staff.

Thus the workers arrived in 1965 into Igrimgaz, the first gas management in the North, had without any exception adequate qualifications and considerable length of working in gas industry.⁸⁶ In 1970 the highest skill categories in the associations of the oil industry included 98.6 percent of drilling workers, 93.9 percent of bulldozer operators.⁸⁷ In the gas industry 75.7 percent of industrial-production personnel were engaged in qualified and highly qualified labor.⁸⁸

To achieve such a degree of qualification it was necessary to have a length of working in this occupation of no less than 8-10 years. Consequently, the majority employed at the enterprises and associations of the oil-and-gas complex were, as a rule, 30-39 years old. The women also belonged to this age group, and children arriving with their parents were 10-19 years old (this was one of the factors of

⁸⁶ TsGANKh, f.458, op.1, d.32, l.97.

⁸⁷ TsGANKh, f.70, op.1, d.3037, l.332.

⁸⁸ TsGANKh, f.458, op.1, d.2221, l.41.

the increase of the share of this group in the population of the Tyumen North). This is proved by analysis of age structure of the principal production subdivisions of oil-and-gas complex.

The data on the Tyumen North boring crews shows that in 1966 the workers were distributed according to their age as follows: under 20 years - 1.0 percent, 20-24 - 4.1 percent, 25-29 - 26.4 percent, 30-34 - 32.7 percent, 35-39 - 22.5 percent, 40 and over - 13.3 percent.⁸⁹ In 1965 in the gas industry 79.7 percent of engineering staff were over 30.⁹⁰ This is why we think that the main changes of the age structure in the 1960s were related to the increase of the share of population of 30-44 years old.

For the third, this is a circumstance that makes the Tyumen North radically distinctive from Russia's other regions - already at the first stage of development the proportion of population older than the able-bodied age was sharply decreasing, whereas in the region in general it was increasing. Actually the

⁸⁹ TsGARF, f.5470, op.29, d.1871, l.2, 6, 16.

⁹⁰ GATO, f.2101, op.1, d.29, l.9.

age limit for in-migrants was 40-44. For the elder age groups an intensive out-migration was typical. As a result, in 1972 in Khanty-Mansiyskii okrug only 8.9 thousand subjects or less than 2.6 percent out of the total population of 339.3 thousand were pensioners, including non-working among them - 2.0 percent.⁹¹

In the 1970s the age structure of population changed. Against the background of the reduction of the youngest and oldest age groups (0-19 and over 55), firstly, a considerable increase in the ratio of the population of 20-29 took place (from 16.9 percent to 28.1 percent in Khanty-Mansiyskii okrug, from 17.0 percent to 27.4 percent in Yamalo-Nenetskii okrug). Secondly, the middle age groups from 40 to 54 became more common.

The increase in the ratio of the population of 20-29 represented obvious result of an increase in the migration of young people to the region. The 1970s were marked as the peak of increase of manpower in the former USSR.⁹² Every year more and more men and women

⁹¹ GATO, f.107, op.43, d.12, l.20.

⁹² Rybakovskii (1980), p.171.

entered the workforce, and the number of jobs in some regions (Ukraine, Middle Asia and others) stimulated an intensive migration of the youth to the regions of new industrial development, in particular, to the Tyumen North.⁹³ More than 125 thousand subjects had arrived there after Komsomol passes before the beginning of the 1980s.⁹⁴

The increase in the share of middle aged people represented the case of change in demographic structure of the population which was related to the fast increase of the population of ages 30-44 during the 1960s. By the time of the census of 1979 the majority of them had transferred to the age group of 40-54.

In this light table 13 quite vividly illustrates the regularity of this succession related with stabilization of population and staff potential of the Tyumen North. To follow the dynamics of changes of its age structure, it is apparent that an increase in the share of the population aged 10-19 taking place in the

⁹³ Khaitun (1982), pp.102-103.

⁹⁴ Pashkov (1988), p.91.

1960s influenced the growth of the potential of the age group of 20-29 in the 1970s and 30-39 in the 1980s. The increase in the proportion of the group of 30-44 in the 1960s, in its turn, stimulated the increase of the population of 40-54 in the 1970s and stabilized this group during the 1980s.

According to the data of the 1979 census, distribution of the population of the North of the age groups essentially differed from that of the whole Tyumen province. The youth and middle groups were the most representative ones - in Khanty-Mansiyskii okrug the ratio of the population aged 20-29 was 28.1 percent, in Yamalo-Nenetskii okrug - 27.4 percent (in the Tyumen province on the whole - 23.4 percent), the group of 30-39 - 17.2 percent and 18.3 percent respectively (13.5 percent in the Tyumen province). The proportion of elder age groups had considerably decreased. By the time of the 1979 census in the area of new development 24.9 thousand pensioners were living, which did not exceed 3.4 percent (in the Tyumen province on the whole - 9.7 percent).⁹⁵

⁹⁵ Alexeev and Logunov (1990), p.144.

In the 1980s these processes were further developed (see table 14). The age group of 30-39 was increasing quicker than the others, its number had increased in Khanty-Mansiyskii okrug 3.1 times, in Yamalo-Nenetskii - 4.3 times, the total population being increased 2.2 and 3.1 times respectively.⁹⁶

To a great degree this situation was determined by stabilization of the region's population and staff potential, which in the previous decade was formed with the fastest pace of increase of the age group of 20-29 as well as by new tendencies in the regional policy related to the orientation towards labour-saving and attraction of exclusively highly skilled specialists. As it was mentioned above, most of them were about 30 years old. Thus, in the oil-and-gas complex 94.5 percent among newly formed staff were the workers with medium and high level of qualification.⁹⁷

In the towns and settlements of the Tyumen North the share of elder age groups had decreased. The proportion of pensioners in Novy Urengoi did not exceed one percent in 1986. This estimate is

⁹⁶ Vozrastnoi sostav naseleniya RSFSR...(1990), pp.296, 299.

⁹⁷ Alexeev, Logunov and Shabanov (1987), p.42.

Table 14

Age composition of the population in the main cities of the Tyumen North, percent

Age groups	Surgut		Nizhnevartovsk		Nefteyugansk		Nadym		Urengoi	
	1979	1989	1979	1989	1979	1989	1979	1989	1979	1989
0-9	19.2	22.7	20.1	23.4	20.4	23.1	20.4	21.1	13.1	22.8
10-19	12.6	13.7	12.1	13.7	12.6	13.7	13.5	14.1	9.0	13.0
20-24	13.7	7.0	14.0	7.3	14.1	7.3	10.2	6.1	15.7	6.9
25-29	16.7	13.6	17.8	13.5	16.6	13.4	15.5	12.0	21.1	15.8
30-34	10.2	13.5	10.7	13.8	10.0	13.4	12.3	12.7	14.0	14.4
35-39	8.5	10.7	8.6	11.1	8.9	10.6	11.5	12.1	11.0	11.6
40-44	8.0	5.9	7.8	5.7	8.0	5.8	9.5	7.9	10.1	6.5
45-49	4.3	4.6	3.9	4.4	4.1	4.8	3.9	6.5	3.5	4.5
50-54	3.5	4.0	2.9	3.6	3.0	4.1	2.2	5.1	1.9	3.2
55-59	1.2	1.8	0.9	1.5	0.9	1.7	0.6	1.4	0.5	0.8
60 +	2.1	2.5	1.2	2.0	1.4	2.1	0.4	1.0	0.1	0.5

Source: Itogi Vsesoyuznoi perepisi naseleniya 1989 goda. Raspredelenie naseleniya po polu i vozrastu. Khanty-Mansiyskii i Yamalo-Nenetskii avtonomnye okruga. Tyumen, 1990, pp.42-43, 47-48, 53-54, 158-159, 162-163, 183.

approximately 20 times lower than the average one in Russia.⁹⁸

The specificity of the age structure was also manifested by quite a high ratio of children and teenagers in the Tyumen North. According to the data from the Russian Federation statistical institution, in 1989 their ratio was 34.3 percent in the Tyumen province on the whole (all the children and teenagers up to 15 were considered), whereas in Western Siberian economic region their share amounted to 29.9 percent, in Russia on the whole - 27.0 percent.⁹⁹

Such an age structure of the population apart from obvious advantages (high degree of employment in public production, lower loads to medical services and so on) had also a number of drawbacks. In particular, the problem of children's pre-school education was very acute in the towns of the Tyumen North. The number of children in pre-school establishments of Khanty-Mansiyskii okrug had increased 13.6 times over 1965-1988, of Yamalo-Nenetskii - 14.6 times.¹⁰⁰

⁹⁸ Pravda Severa, 1986, Febr. 27th.

⁹⁹ Sostav semei, dokhody i zhilishnye usloviya... (1990), p.3.

¹⁰⁰ Narodnoe khozyaistvo RSFSR v 1980 godu (1981), p.373; Narodnoe khozyaisnvo RSFRS v 1988 godu (1989), p.178.

However, there were only a few children's establishments. In Novy Urengoi only 28 percent of children of pre-school age had the possibility to attend these establishments, in Yamalo-Nenetskii okrug on the whole - only 47 percent.¹⁰¹ Under these conditions almost absolute absence of non-working women-pensioners in the composition of the population entailed women's lack of employment in the production. Data show that 16 women out of each 100 ones of able-bodied age did not work in 1989.¹⁰²

This stimulated an orientation towards a separate living of families. In 1989 the proportion of those living separately was 3.8 percent in Khanty-Mansiyskii okrug, 6.1 percent in Yamalo-Nenetskii.¹⁰³ This situation inevitably led to direct economic and social losses, decelerated social adaptation of new-settlers, intensified out-migration. Against the background of large differences in the growth of social and everyday infrastructure and, in particular, of children's pre-school establishments, a reduction in birth rate. In

¹⁰¹ Logunov (1987), p.194; Krasnyi Sever, 1986, Apr. 1st.

¹⁰² O zanyatiyakh naseleniya Tyumenskoi oblasti (1990), p.5.

¹⁰³ Itogi Vsesouzhnoi perepisi naseleniya...(1990), p.6-7.

Novy Urengoi 75 percent of population were under 30, the birth-rate there was 21.2 per 1,000 in 1986, which was lower than average for the Tyumen province.¹⁰⁴

Under the impact of domination of the youth in the composition of migrants in the Tyumen North, as well as the highest in Western Siberia birth-rate, already at the end of the 1960s the oil-and-gas extracting regions had the lowest population average age. In 1969 in Surgut and Nizhnevartovsk it was 26 years, Nefteyugansk - 24, whereas in West Siberia on the whole it was over thirty.¹⁰⁵

Analogous proportions remained in 1979-1989 (see table 15). Moreover, in the regions of new industrial development, in the bounds of Khanty-Mansiyskii and Yamalo-Nenetskii okrugs, the average age tended to be lower. Two circumstances must be noted. The first is that in the towns with a stabilized population (Urai, Nadym) the processes of natural aging took place. At the places where the in-migration remained intensive, it in combination with a high birth-rate, completely

¹⁰⁴ Tyumenskaya pravda, 1987, Jan. 15th.

¹⁰⁵ Malinin and Ushakov (1976), p.93.

Table 15

Medium age of the population, years

Region	Total		Males		Females	
	1979	1989	1979	1989	1979	1989
Tyumen province	29.6	28.6	27.7	27.4	31.5	29.8
Khanty-Mansiyskii okrug	26.4	26.0	26.0	25.7	26.8	26.3
Surgut	26.3	26.3	26.3	25.8	26.4	26.8
Nizhnevartovsk	25.5	25.7	25.7	25.4	25.3	26.0
Nefteyugansk	25.5	26.0	25.5	25.6	25.5	26.5
Urai	26.2	27.2	25.3	26.3	27.1	28.0
Kogalym	-	24.2	-	24.6	-	23.7
Langepas	-	24.5	-	24.5	-	24.5
Yamalo-Nenetskii okrug	26.4	25.7	26.3	25.9	26.5	25.5
Nadym	25.5	26.9	25.8	27.1	25.2	26.7
Noyabr'sk	-	24.9	-	25.1	-	24.7
Labytnangi	27.7	27.2	27.7	27.4	27.7	26.9
Novyi Urengoi	27.3	25.2	28.4	25.7	25.4	24.6
West Siberian economic region	32.2	32.6	29.6	30.4	34.6	34.7
Russia on the whole	34.0	34.7	30.8	31.9	36.7	37.2

Source: Vozrastnoi sostav naseleniya RSFSR po dannym Vsesoyuznoi perepisi naseleniya 1989 goda. M., 1990, pp.59, 62; Itogi Vsesoyuznoi perepisi naseleniya 1989 goda. Raspredelenie naseleniya po polu i vozrastu. Khanty-Mansiyskii i Yamalo-Nenetskii avtonomnye okruga. Tyumen, 1990, pp.25, 31, 43, 48, 52, 54, 58, 155, 159, 163, 169, 183.

countered increase in the ratio of the elder age groups, the tendency of rejuvenation of the population being retained.

This is especially apparent in the towns in the oil areas of Middle Priobye in 1985, such as Kogalym, Langepas, Raduzhny the population of which was considerably younger. The second is certain differences between the male and female ages. The average female age was slightly older, as there were more females in the older age groups. However, in the towns at the initial stage of formation this regularity did not manifest itself. On the whole, the average age in the regions of new development in the Tyumen North was the lowest among all of the Russia's territorial-administrative regions. In 1989 the difference with the average republic's estimates was 8.5-9 years.¹⁰⁶

The differences in the age structure of Russia's population and the regions of new industrial development formed by the end of the 1980s were quite considerable.

¹⁰⁶ Vozrastnoi sostav naseleniya RSFSR... (1990), p.8.

First, in the Tyumen North the groups at the age of 20-39 prevailed as a direct result of in-migration. Second, migration promoted equalization of the ratio of the population in the age of 40-49 with the republic's average. Third, in the youngest and oldest age groups the specificity of the structure of the Northern population was vividly manifested, i.e. a high proportion of children and teenagers and a low proportion of pensioners. The logic of the above-mentioned data may cause some doubt concerning the estimate of the population aged 10-19 being close to the average republic's one, since according to the demographic statistics it must be essentially higher.

However, there are no contradictions in this fact, and it also reflects the specificity of sex and age composition of the population of the North. The ratio of teenagers' groups (10-15 years old) indeed was higher - 10.0 percent in Khanty-Mansiyskii okrug and 10.3 percent in Yamalo-Nenetskii okrug (8.6 percent in Russia on the whole). The group aged 16-19 had been sharply reduced to 3.5 percent in Khanty-Mansiyskii

okrug and to 3.4 percent in Yamalo-Nenetskii okrug (5.4 percent in Russia on the whole).¹⁰⁷

This represented a direct result of school graduates' departure for further studying beyond the bounds of the regions of new development which lacked higher educational establishments and had a poor network of vocational technical education as well as a result of young males' levy, since actually all of them were on military service in the country's other regions. Investigation of the staff potential of the basic branches of the oil-and-gas complex shows that only an insignificant part of them returned to the previous place of residence from higher educational establishments and after military service in the Soviet Army.¹⁰⁸

The age structure shaped in the Tyumen North by the end of the 1980s showed considerable changes in the numbers of able-bodied workers (males at the age of 16-59 and females at the age of 16-54). The absolute increase of the population of the elder age

¹⁰⁷ Vozrastnoi sostav naseleniya RSFSR... (1990), pp.64, 296, 299.

¹⁰⁸ Alexeev, Logunov and Shabanov (1987), p.35.

group and increase of the birth-rate in the towns and settlements of the Tyumen North had resulted in a considerable rise in the proportion of the population of younger and older than the able-bodied age.

On the whole in Khanty-Mansiyskii okrug the share of the subjects younger than able-bodied age had increased from 29.1 to 33.2 percent from 1979 to 1989 (in particular, in Surgut - from 27.0 to 32.5 percent, Nizhnevartovsk - from 28.0 to 33.3 percent, Nefteyugansk - from 28.7 to 33.4 percent). The number of subjects older than the able-bodied age had increased from 3.4 to 3.5 percent (in particular, in Surgut - from 2.6 to 3.5 percent, Nizhnevartovsk - from 1.7 to 2.7 percent, Nefteyugansk - from 1.9 to 2.9 percent).¹⁰⁹ In the Russian Federation on the whole the increase was from 23.3 to 24.5 percent for the population younger than the able-bodied age and from 16.3 to 18.5 percent for the population older than the able-bodied age.¹¹⁰ So it may be inferred that this tendency was of a general character.

¹⁰⁹ Itogi Vsesoyuznoi perepisi naseleniya... (1990), pp.13, 43, 48, 54.

¹¹⁰ Vozrastnoi sostav naseleniya RSFSR... (1990), p.8.

However, the share of the population younger than the able-bodied age in the Tyumen North was increasing quicker and was essentially higher than in the Russian Federation on the whole. As regards the group older than the able-bodied age, its proportion in the regions of new development was approximately 5 times lower than Russia's estimates. The prediction of the reduction of the proportion of able-bodied population in the 1980s was made by specialists.¹¹¹

However, negative consequences of these changes affected the Tyumen North to a lesser degree, since the population at able-bodied age prevailed in the composition of migrants (in 1989, for example, their ratio was 76.1 percent of all migrants to Khanty-Mansiyskii okrug and 77.3 percent of those to Yamalo-Nenetskii okrug).¹¹²

In Yamalo-Nenetskii autonomous okrug analogous processes took place. The population under the able-bodied age was there 32.8 percent in 1989 (28.8 percent in 1979), in particular, in Nadym - 31.6

¹¹¹ Kostin (1981), pp.23, 26.

¹¹² Estestvennoe dvizhenie i migratsiya naseleniya Tyumenskoi oblasti za 1986-1989 gg. (1990), p.102.

percent (30.0 in 1979), Novy Urengoi - 32.6 percent (18.9 percent in 1979), Noyabr'sk - 34,2 percent. The dynamics of changes in the group at an older age was here different to that in Khanty-Mansiyskii okrug. The proportion of this group did not exceed 2.1 percent in 1989 (3.4 percent in 1979), in particular, in Nadym - 1.6 percent, Novy Urengoi - 0.3 percent, Noyabr'sk - 0.2 percent.¹¹³

As a result, in the 1980s the share of the able-bodied population of the Tyumen North had been reduced: in Khanty-Mansiyskii okrug from 67.5 to 63.3 percent, in Yamalo-Nenetskii okrug - from 67.8 to 65.1 percent.¹¹⁴ This caused an increase in workload to the working population, since the ratio of able-bodied people in its composition had also decreased.

3.3. ETHNIC COMPOSITION OF POPULATION.

Intensive migration in combination with expansion of geographic characteristics of migration had considerable effects on the ethnic composition of the population of the Tyumen North.

¹¹³ Itogi Vsesoyuznoi perepisi naseleniya... (1990), pp.143,159,163,169.

¹¹⁴ O zanyatosti naseleniya Tyumenskoi oblasti (1990), p.2.

Under the impact of migrational processes the ethnic structure of the northern population was actually built anew. The structure today doesn't reflect the previous ethnic proportions. Considering that these territories were sparsely populated before intensive industrial development and migration began, it would be expected that the population would be formed with ethnic groups represented as an aggregate of the migrants of different generations born not only in different regions of Russia but also beyond its frontier. At the same time, the period of formation of the new population is very short - several decades. So in this case it is hardly integration and interaction of different cultures, but co-existence of groups of population belonging to different nationalities, religions, and cultures, and consequently following different models of demographic, and in particular, reproductional conduct.

Already at the initial stage of development of oil and gas resources specialists noticed an increase in the proportion of the Russians, the Ukrainians, and the Tatars, and a relative decrease of the share of

other national groups, first and foremost of the native peoples of the North.¹¹⁵ Comparison of the data of the censuses of 1959 and 1970 shows that in the Tyumen province there were no essential changes in the 1960s. The proportion of the Ukrainians had increased from 1.6 to 1.8 percent, of the Tatars - from 6.6 to 7.3 percent, of the Chuvashs - from 0.7 to 1.2 percent; meanwhile the share of the Russians had decreased from 81.9 percent to 81.2 percent, of the Germans - from 2.2 to 1.5 percent, of the Komi people - from 0.9 to 0.8 percent, of the native peoples of the North - from 3.6 to 3.4 percent.¹¹⁶

The dynamics of these changes was decisively influenced by the processes of formation of the staff of the oil-and-gas complex. At the initial stage of development of the deposits the representatives of old oil regions, such as Aserbaijan, Tataria and Bashkiria dominated in the composition of new settlers. In 1965 they constituted 90 percent of all Tyumen oilmen.¹¹⁷ In the gas industry the overwhelming majority of the

¹¹⁵ Misevich and Chudnova (1973), p.108.

¹¹⁶ Narodnoe khozyaistvo Tyumenskoi oblasti... (1971), p.97-98.

¹¹⁷ GATO, f.124, op.179, d.57, l.101; Smorodinskoy (1971), p.434.

workers had arrived from regions with developed gas extraction, such as Povolzhye, Ukraine, North Caucasus. In 1968 the representatives of 45 nationalities were engaged in the gas industry of the North.¹¹⁸

The domination of new-comers from old oil- and gas-extracting regions fueled the increase of the ratio of the Tatars in Glavtyumenneftegas in 1969 to 11.1 percent, Bashkirs - to 2.8 percent, the Ukrainians - to 6.2 percent, which considerably exceeded the estimates of their proportion in the composition of the whole population.¹¹⁹ At the same time this situation had an essential effect on the ethnic composition of the region's population.

By the end of the 1970s representatives of 102 nationalities of the former USSR were living in the territory of Khanty-Mansiyskii okrug, 87 nationalities lived in Yamalo-Nenetskii okrug.¹²⁰ It was here that, due to the concentration of a considerable number of migrants in new towns and settlements, the

¹¹⁸ TsGANKh, f.458, op.1, d.32, l.97; f.5470, op.29, d.2306, l.99

¹¹⁹ TsGANKh, f.70, op.1, d.2137, l.157.

¹²⁰ Veselkina (1982), p.19.

transformation of the population's national composition was most intensive (see table 16). In contrast to the reduction in the proportion of the Russians and the nationalities of the Extreme North a considerable increase in the share of Ukrainians, Belorussians, Moldavians, Bashkirs, Tatars, Azerbaijanians took place.

The total increase of the population of Khanty-Mansiyskii okrug in the 1980s was 2.3 times, whereas the number of the Russians only doubled, of the Tatars had increased 2.7 times, the Ukrainians - 3.3 times, Belorussians - 3.7 times, Bashkirs - 4.1 times, Moldavians - 6.0 times, Azerbaijanians - 10.2 times.¹²¹ In an analogous way these processes occurred in Yamalo-Nenetskii okrug. The population there had increased from 1979 to 1989 3.1 times, in particular, the Russians - 3.1 times, Belorussians - 5.9 times, Ukrainians - 5.4 times, Bashkirs - 7.8 times, Moldavians - 10.4 times, Azerbaijanians - 11.1 times.¹²²

¹²¹ Itogi Vsesoyuznoi perepisi naseleniya. Natsional'nyi sostav naseleniya Tyumenskoi oblasti (1990), pp.91-92.

¹²² Ibid, pp.172-173.

Table 16

Ethnic composition of population of the
Tyumen province, percent

Ethnic groups	Tyumen province		Khanty-Mansiyskii okrug		Yamalo-Nenetskii okrug	
	1979	1989	1979	1989	1979	1989
Russians	79.2	72.6	74.3	66.3	59.0	59.2
Ukrainians	4.2	8.4	8.0	11.6	9.9	17.2
Belorussians	0.9	1.6	1.3	2.2	1.3	2.6
Tatars	7.3	7.3	6.5	7.6	5.4	5.3
Bashkirs	0.5	1.3	1.3	2.4	0.5	1.4
Chuvashs	1.0	1.0	0.8	1.1	0.6	0.7
Moldavians	0.2	0.6	0.3	0.8	0.3	1.1
Kazakhs	0.5	0.5	0.1	0.2	0.1	0.3
Komi	0.6	0.4	0.5	0.3	3.6	1.2
Germans	1.2	1.0	0.6	0.7	0.7	0.6
Azerbaijans	0.1	0.6	0.2	1.0	0.2	0.7
Mordva	0.3	0.4	0.6	0.6	0.3	0.4
Udmurts	0.2	0.2	0.6	0.6	0.1	0.2
Mari	0.2	0.3	0.3	0.5	0.2	0.2
Indigenous people of the North	2.5	1.7	3.3	1.5	16.1	6.0
Others	1.1	2.1	1.3	2.6	1.7	2.9

Source: Itogi Vsesoyuznoi perepisi naseleniya 1989 goda. Natsional'nyi sostav naseleniya Tyumenskoi oblasti. Tyumen, 1990, pp.10, 91-92, 172-173.

Under the impact of migrational processes into which the representatives of the republics of the former USSR and Russian autonomies were increasingly involved (in 1989 68.1 percent of the migrants were from the Russian Federation and 31.9 percent of the representatives from other republics of the former USSR),¹²³ a considerable reduction in the share of the Russians took place. In the composition of migrants in 1988 their number was merely 59.9 percent, in the net increase of the population - 45.5 percent, in 1989 - 60.6 and 47.3 percent respectively.¹²⁴

A characteristic trend in the 1980s was a considerable increase of the proportion of the Ukrainians; their number had increased 3.5 times and reached 260.2 thousand subjects.¹²⁵ The mass immigration from Ukraine was caused by the processes of reduction of jobs in the republic, labor excess in some of its regions, as well as presence of skilled specialists in the oil-and-gas industry, and in construction of oil-and-gas enterprises.

¹²³ Demograficheskiy ezhegodnik SSSR (1990), p.544.

¹²⁴ Estestvennoe dvizhenie i migratsiya... (1990), p.105.

¹²⁵ Tyumenskaya oblast' v tsifrakh (1990), p.16.

Specialists have repeatedly noticed a high migration mobility of Ukrainians in contrast to the other republics of the former USSR.¹²⁶ By the middle of the 1980s 15.7 percent of oilmen, 19.3 percent of gas workers and 21.6 percent of oil-and-gas construction workers were the Ukrainians.¹²⁷ Their proportion in the composition of the population of the regions of new development had doubled in the 1980s, reaching 11.6 percent in Khanty-Mansiyskii okrug and 17.2 percent in Yamalo-Nenetskii okrug. This tendency continued. The ratio of migrants from Ukraine was 13.4 percent in 1988, 13.9 percent in 1989. The main stream of new settlers went to the northern districts. Thus the proportion of Ukrainian migrants in Khanty-Mansiyskii okrug was 14.0 percent in 1988 and 13.9 percent in 1989, in Yamalo-Nenetskii okrug - 20.9 and 21.8 percent respectively.¹²⁸

It is evident that the changes in the ethnic composition of the population in the 1980s were related first and foremost with the domination of

¹²⁶ Naselenie i trudovye resursy SSSR... (1981), p.169.

¹²⁷ Alexeev, Logunov and Shabanov (1987), p.102.

¹²⁸ Estestvennoe dvizhenie i migratsiya... (1990), pp.90-98.

directions of migration streams into the region determined by the necessity in satisfying the demand of the oil-and-gas complex for specialists having experience in the oil-and-gas industry. Thus, in-migration from the areas of Povolzhye - Tataria and Bashkiria as well as from the Transcaucasian republics was considerable. In 1988 in the net increase of the region's population there were 12.7 percent of the Tatars, 5.6 percent of Bashkirs, 2.2 percent of Azerbaijanians, in 1989 - 15.3, 6.5 percent and 1.2 percent respectively.¹²⁹

A distinctive feature of the 1980s was a continuous increase of migrants from Middle Asia, Caucasus and Transcaucasus among all the migrants. Thus the number of the Uzbeks had increased 9.5 times in Khanty-Mansiyskii okrug and 8.9 times in Yamalo-Nenetskii, of the Kirgizs - 12.5 and 6.9 times respectively, of the Avars - 16.2 and 20.2 times, of the Nogais - 17.8 and 49.9 times, of the Kumyks - 34.6 and 67.2 times.¹³⁰

¹²⁹ Estestvennoe dvizhenie i migratsiya...(1990), p.105.

¹³⁰ Itogi Vsesoyuznoi perepisi naseleniya 1989 g. Natsional'nyi sostav naseleniya Tyumenskoi oblasti (1990), pp.90-92, 95, 98.

It is difficult to make a simple assessment of the changes in the ethnic structure of the population. Recently apart from migration and natural movement of population, one more factor has had effects on the ethnic proportion of the population of the Tyumen North. It is hardly possible to make a quantitative estimation of the role of this factor. This is the assimilation of the indigenous population. By this it meant not only international marriages with the representatives of the Russians and other nationalities, but national self-definition when answering the question of nationality in the census. It may be surmised that the census of 1989 supplied more exact information of the nationality of the northern people in comparison with previous ones, first and foremost under the impact of the rise in national movements and increasing prestige of being northern natives.¹³¹

On the other hand, the data of the same census shows a sharp rise in the rate of increase of the quantity of some northern indigenous nationalities.

¹³¹ Artyomov and Logunov (1992), p.45.

Taking into consideration the stable rate of natural increase, it may be inferred that the process of opposite assimilation has begun, i.e. many representative of indigenous people do return their own nationality instead of hitherto indicated one. While over the period between the censuses of 1970 and 1979 the quantity of northern nations had increased by merely 2.9 percent, over the following period between the censuses of 1979 and 1989 it had increased almost by 16 percent.¹³²

3.4. POPULATION REPRODUCTION.

Intensive migration processes had formed a specific sex and age structure of the region's population and increasingly influenced the dynamics of the population's reproduction. Domination of youth and middle-aged persons as well as higher living standards in comparison with Russia's other regions had resulted in a higher birth-rate than Russia's average and a relatively low death-rate (see table 17). Due to this, the natural increase of population of the Tyumen North was higher than in the country's developed regions.

¹³² Gurvich and Sokolova (1991), p.8.

Table 17

Birth rate, death rate and natural increase of population in the Tyumen North, Russia and the USSR, per 1,000

Region	1960	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Birth rate													
USSR	24.9	17.4	18.1	18.3	18.5	18.9	19.8	19.6	19.4	20.0	19.8	18.9	17.6
Russia	23.2	14.6	15.7	15.9	16.0	16.6	17.5	16.9	16.5	17.2	17.2	16.0	14.6
Tyumen North	28.2	17.7	19.4	19.5	20.6	22.8	23.2	21.9	22.5	22.9	22.6	20.1	17.4
Death rate													
USSR	7.1	8.2	9.3	10.3	10.2	10.1	10.4	10.8	10.6	9.8	9.9	10.1	10.0
Russia	7.4	8.7	9.8	11.0	10.9	10.7	11.1	11.6	11.3	10.4	10.5	10.7	10.7
Tyumen North	7.9	8.6	8.6	9.1	8.5	7.9	8.2	8.3	7.4	6.4	6.3	6.1	6.0
Net natural increase													
USSR	17.8	9.2	8.8	8.0	8.3	8.8	9.4	8.8	8.8	10.2	9.9	8.8	7.6
Russia	15.8	5.9	5.9	4.9	5.1	5.9	6.4	5.3	5.3	6.8	6.7	5.3	3.9
Tyumen North	20.3	9.1	10.8	10.4	12.1	14.9	15.0	13.6	15.1	16.5	16.3	14.9	11.4

Source: Demograficheskii ezhegodnik SSSR. 1990. M., 1990, p.99, 150; Naselenie SSSR. 1988. M., 1989, pp.56-59, 100; Tyumenskaya oblast v tsifrakh.1981-1985 gody. Sverdlovsk, 1987, p.5; Estestvennoe i mekhanicheskoe dvizhenie naseleniya Tyumenskoi oblasti za 1986-1987 gody. Tyumen, 1988, pp.3, 9.

The ratio of natural increase (i.e increase based only on birth and death rates) in the total increase of the region's population was steadily rising despite a continuous increase of in-migration. Of interest is the fact that this situation was determined from the supply of the branches of the oil-and-gas complex with manpower, as more and more children of the migrants of the first decade entered able-bodied age.

From the analysis of the data presented in table 17 three substantial conclusions may be drawn. For the first, birth-rate in the Tyumen province has always been higher than the analogous estimates in the former USSR and in the Russian Federation. In the 1960s this was determined by a lesser scale of demographic losses related with the Great Patriotic War of 1941-1945. Since the 1970s, increase in the birth-rate was determined by mass in-migration of younger age groups. It is not accidental that mentioned above dynamics of the age composition of the population directly correlate with the data of table 13 - it was in the 1970s, the peak of the increase of population was aged

20-29, and the upward tendency of the birth-rate was distinctly evident.

For the second, the same period coincides perfectly with estimates of the death-rate compared with those in the former USSR and in the republics. From the beginning of the 1970s under the impact of a considerable reduction of pensioners (especially in new towns and settlements of the Tyumen North), the death-rate in the region was steadily decreasing and reached in 1989 the lowest estimates among all the regions of the European part of RSFSR, the Urals and Siberia, being lower only than those of the Kamchatka and Magadan provinces of the Far East economic region.¹³³

For the third, in the 1960s-1970s the reduction in the estimates of natural increase caused an immense gap between all-national and regional numbers. The Tyumen North became not only the region with the highest migration circulation, first and foremost it concerned in-migration, but also one of the most successful regions in terms of the rate of

¹³³ Rybakovskii (1993), pp.64-65.

reproduction of the population. In 1966-1970 in-migration only started and its influence on the sexual and age structure of the population was insignificant, the major increase in the 1960s was due to the middle-age groups. At that time the natural increase of the region's population was on the average 9.2 per 1,000.¹³⁴ In the 1970s and especially in the 1980s a wave of young migrants became the basic factor of the population's growth. From the above-said it may be inferred that the reproduction of the population in the period under discussion to a great degree was determined by the rate and structure of in-migration.

The estimates of natural growth of the population essentially differed from the average regional ones in the oil-extracting districts, especially in new towns and settlements of the Tyumen North where the proportion of aged people in the sex and age composition was low due to the intensive in-migration. Thus, in 1970, the birth-rate in Nizhnevartovsk was higher than the average in West Siberia by 46 percent, in Surgut - by 53 percent, in Nefteyugansk - by 73

¹³⁴ Narodnoe khozyaistvo Tyumenskoi oblasti...(1971), p.8.

percent.¹³⁵ This tendency remained in the 1980s.

Total coefficients of birth-rate there were, as a rule, higher and of death-rate - lower than in the Tyumen province on the whole (see table 18). The data on 1986-1987 shows the increase of reproduction in new towns, which led to essential changes in the proportion of natural and migration increase of the population.

There are some clear tendencies which determined the processes of population reproduction in the Tyumen North over the last 30 years.

For the first, the development of birth-rate, death-rate, marriage-rate and family formation in the region are completely confined to the model of demographic transition. Birth-rate had increased closely to the level of a simple and then to a narrow substitution of generations. Life expectancy increased, family size decreased, loneliness and uncompleted families were increasing, and the social-professional mobility of the population and the rate of settling in the towns intensified.

¹³⁵ Malinin and Ushakov (1976), pp.24, 85.

Table 18

Birth rate, death rate and net natural increase in the Tyumen province, autonomous okrugs and main cities in 1986-1987, per 1,000

Region	Birth rate		Death rate		Net natural increase	
	1986	1987	1986	1987	1986	1987
Tyumen province on the whole	22.9	22.6	6.4	6.3	16.5	16.3
Khanty-Mansiyskii okrug	25.2	24.6	3.9	3.8	21.3	20.8
Surgut	24.9	24.4	3.5	3.2	21.4	21.2
Nizhnevartovsk	25.9	26.1	3.3	3.2	22.6	22.9
Nefteyugansk	27.9	26.8	3.2	3.3	24.7	23.5
Langepas	30.1	31.4	1.9	3.7	28.2	27.7
Kogalym	25.9	27.0	2.0	2.0	23.9	25.9
Nyagan'	28.4	28.0	3.3	3.4	25.1	24.6
Megion	28.2	29.8	4.2	3.3	24.0	26.5
Radyzhnyi	23.6	24.3	1.7	2.7	21.9	21.6
Yamalo-Nenetskii okrug	22.1	22.3	3.2	2.9	18.9	19.4
Nadym	20.2	20.1	2.8	2.4	17.4	17.7
Novyi Urengoi	22.6	23.9	2.1	1.5	20.5	22.4
Noyabr'sk	23.9	23.4	2.4	2.3	21.5	21.1

Source: Estestvennoe i mekhanicheskoe dvizhenie naseleniya Tyumenskoi oblasti za 1986-1987 gg. Tyumen, 1988, pp.9-13.

For the second, there was a distinct tendency toward ethnic-cultural differentiation of demographic transition. Hence followed the contradiction between the norms of the migrated Russian-speaking population, Slavs in the majority, and the standards of demographic conduct of the indigenous, though not numerous, northern peoples. The first fairly numerous population was at the final phases, the second decreasing group was at the initial phases of demographic transition. Groups of families were based on mixed marriages between migrants and the northern indigenous population. At any rate the ethnic factor remains the basic one even in comparison with the socio-economic situation in the life of the northern population. All this is proved by the data of demographic statistics and the sociology of reproductive and family-and-marriage conduct of the family and the individual under northern conditions.

Recent migrants are characterized by an urban small-family culture with European standards of marriage and modern causes of death, the length of life reaching an average of 70 years. Another type is

characterized by the transition from large- to medium-size family in isolated small populations and a decreased length of life.

For the third, the growth of the population of the Tyumen North in its way of demographic transition is of uncompleted character due to climatic, ecological, socio-economic conditions, and the influence of migration. Demographic backwardness of the region is evidenced by a high rate of infectious diseases. This is illustrated by the high death-rate of pregnant women and infants under one year old, a considerable frequency of abortions, poisoning, traumas, congenital deformities, archaic system of contraceptive conduct. Incompleteness of demographic transition leads to great economic, moral and demographic losses in the area.

Under the impact of migration pressure, socio-psychological and ecological tension, and the high rate of criminality the remarkably high death-rate from murders and suicides does not conform to the laws of demographic transition. Death-rate continues

to play an unacceptably important role in the regulation of the number of the northern population.

For the fourth, reproduction of the population of the Tyumen North for many years has been affected by migration processes. Despite a considerable labor pool accumulated within the shortest period of time this influence was mainly of a destructive nature. This is testified to by the greater proportions of male age groups to female ones, high anthropogenic load on the environment of the North, unfavourable death-rate and disease-rate including nervous and mental disorders, involvement of the population in alcoholism, with large families having more problems with drinking. As regards the change of large-family populations to medium- and small-family categories stimulated by the migration process, this fact as well as the increase in mixed marriages should not be treated as a positive result of «internationalization» of public life. In the most urban settlements of the North an average size of household does not provide the simple substitution of generations. Even among rural population of the Tyumen province (see table 19) for

Table 19

Rural population in the Tyumen province by ethnic groups and size of household in 1989, persons

Ethnic groups	Tyumen province on the whole	Khanty-Mansiyskii okrug	Yamalo-Nenetskii okrug
Russians	3.3	3.4	3.3
Ukrainians	3.2	3.2	3.2
Kazakhs	4.4	-	-
Bashkirs	3.4	3.4	-
Komi	3.5	3.7	3.6
Tatars	3.7	3.5	3.4
Nentsy	4.9	-	4.9
Khanty	4.1	3.9	4.3
Sel'kups	3.7	-	3.7
Mansi	-	4.0	-
Mixed families	3.7	3.6	3.6

Source: Raspredelenie sel'skogo naseleniya Tyumenskoi oblasti po sostavy semei i raionam prozhivaniya. Tyumen, 1990, pp.6, 8-12, 14-16.

the most of ethnic groups an average size of household fluctuates between 3 and 4 persons. The tendency towards small families in the conditions of high death-rate could become fatal for the population, and normal substitution of generations.

Powerful migration pressure promoted such a rapid increase of population in the Russia's North in the 1960s-1980s that normal formation of social-everyday infrastructure, and network of housing had become impossible and was replaced in practice by half-measures and substitute dwellings, everyday life and recreational services. This could not but affect the population's social health, moreover, in view of the fact that the totalitarian forms of migrations, deportations and exiles, and establishment of a dense network of corrective labor camps and other punitive establishments in the North which favoured the creation of a specific type of a northern individual often with a criminal past, neglecting his own health, and inclined to narcotics and alcohol. Naturally it seems very difficult to make any influence on the changes in self-preserving behavior of such a type of

personality. Growth of a population with marginal social skills in the North caused long years of functioning in an environment with obvious destructive forms of social and demographic conduct.

For the fifth, loaded with the problems of incompleteness of demographic transition the Tyumen North has entered a period of deep demographic catastrophes that have embraced the whole of the Russian Federation. Since the beginning of the 1990s these catastrophes apparently acquired the form of depopulation processes. In 1989-1990 the situation could be treated as pre-crisis and the demographic slump could be entirely (or by two thirds) explained by unfavorable influence of sex and age shifts in the most fertile female groups. From 1991, delay of child-bearing in the families and a sharp decrease of birth-rate took place.¹³⁶

The statistical models show a parallel reduction in the estimates of life expectancy. The evident slump of birth-rate was now caused more by the rise in social tension and worsening of the population's

¹³⁶ Artyomov and Logunov (1992), p.69: Rybakovskii (1993), pp.64-65.

living standards than by the shifts in the age structure as previously. According to different estimations, from one third to two thirds of the families do delay or eliminate the desire for children. Continuation of this tendency could have catastrophic consequences for the Tyumen North with an incompleted demographic transition in respect of death-rate and the initiated mass out-migration of the most able-bodied part of the migrated population with their families into other regions. Certainly, the crisis could have been avoided with a stable public growth and a more or less well thought out demographic policy. Unfortunately, there is no single demographic policy for both the Tyumen province and the whole Russian Federation. It has been substituted by isolated, weakly connected measures on social aid to the family, children, aged persons and invalids. Obviously, such an approach is not adequate for the regulation of productive and migration processes.

The population's reproduction continued within the 1980s and manifested itself in 1988-1989 when the total worsening of the economic situation in the West

Siberian oil-and-gas complex and devaluation of northern wages caused by intensifying inflation caused the reduction of in-migration and the start of mass out-migration from oil- and gas-extracting districts. In 1988, the natural increase of the population of the Tyumen province was 41.8 thousand subjects, and for the first time in the history of development of oil and gas resources it became close to mechanical (net migration) increase numbering 42.7 thousand subjects.¹³⁷ The share of natural increase in the population was 51.4 percent in Surgut, 70.5 percent in Novy Urengoi, 88.1 percent in Noyabr'sk and over 100 percent in Nefteyugansk and Nadym. Thus it compensated for the out-migration from these towns.¹³⁸

In 1989 a sharp reduction of the estimates of birth-rate took place. It was caused by the unstable economic and political situation in the country in general as well as in the region. This process had affected the birth-rate in the centers of the oil-and-gas industry. The birth coefficient calculated per

¹³⁷ Estestvennoe dvizhenie i migratsiya...(1990), pp.24, 85.

¹³⁸ Ibid, pp.26-28, 87-89.

1,000 subjects of the population was 17.9 in Surgut and Nizhnevartovsk, 16.6 in Noyabr'sk, 15.9 in Novy Urengoi, 19.3 in Nefteyugansk, 20.0 in Nyagan'.¹³⁹ However due to relatively low death-rate, its coefficient calculated per 1,000 subjects was 3.5 in Surgut and Nefteyugansk, 3.2 in Nizhnevartovsk and Nyagan', 2.3 in Nadym and Noyabr'sk, 1.9 in Novy Urengoi.¹⁴⁰ Natural increase stayed at a high rate and had reached in 1989 35.2 thousand subjects or 53.7 percent of the total increase of the population.¹⁴¹

Thus, for the first time in a quarter of a century since the beginning of industrial development of Tyumen oil and gas deposits the proportion of natural increase exceeded net migration. The ratio of natural increase to the total increase of population was 49.4 percent in Khanty-Mansiyskii autonomous okrug, 68.4 percent in Yamalo-Nenetskii okrug, 67.3 percent in Nizhnevartovsk, 90.1 percent in Nefteyugansk, 89.6 percent in Novy Urengoi, 99.8 percent in Nadym.¹⁴²

¹³⁹ Demograficheskii ezhegodnik SSSR (1990), pp.132, 174-175.

¹⁴⁰ Estestvennoe dvizhenie i migratsiya...(1995), pp.17, 19.

¹⁴¹ Demograficheskii ezhegodnik SSSR (1990), pp.174-175, 178.

¹⁴² Estestvennoe dvizhenie i migratsiya...(1990), pp.26-28, 87-89.

The positive, from the point of view of demography laws, age structure of the population in the new settlement areas was backed up by the strong migratory inflows, which we can assume have definitely started to change to the opposite since the late 1980s. So, whereas back in 1989 migration was responsible for 28 percent of population growth in Nizhnevartovsk, the year 1990 witnessed an unprecedented outflow when 1.3 thousand people left the city.¹⁴³

Cities and settlements of the Tyumen North noted a sharp increase of out-migration: to the Ukraine, the Volga territories, the central part of Russia, and the North Caucasus. In 1990, for the first time in two and a half decades of oil and gas resources development, the migration balance became negative. In 1991 the population outflow exceeded 33.7 thousand people. The majority of them were people over 30, those having families, and children of school and preschool age.¹⁴⁴

The frightening nature of such a tendency is more than evident. In the average life expectancy at the

¹⁴³ Tyumenskaya pravda, 1991, Jan. 28th.

¹⁴⁴ Estestvennoe dvizhenie i migratsiya... (1995), p.101.

end of the 1980s, the Tyumen province ranked high enough in Russia: 69.8 years (including Khanty-Mansiiskiy okrug: 69.8 years; Yamalo-Nenetskiy okrug: 70.9 years).¹⁴⁵ The dynamics of the said parameter was quite satisfactory: in the period between 1978 and 1989 life expectancy grew from 59.2 to 64.7 years for males, and from 71.3 to 74.6 for females.¹⁴⁶

Against the background of the low mortality rate, explained by prevalence of the young age in the population age structure, there seemed to be no reasons for alarm. Yet the process of population stabilization at the turn of the 1980s-1990s, and stabilization of the age and family structure among the resident population of the Tyumen North, as well as the outflow of population from the region, is able, even with the average life expectancy growth, to dramatically increase the mortality rate. In its turn, the said effect, in combination with the dropping birth rate, will lead to depopulation in the demographic sense of the word.

¹⁴⁵ Artyomov and Logunov (1992), p.44.

¹⁴⁶ Estestvennoe dvizhenie i migratsiya... (1990), pp.32-33.

The latter means the overall reduction of the population due to excess of mortality rate over birth rate. The decreasing number of children per woman of a conditional female generation at the turn of the 1980s-1990s is the first symptom of a tendency to depopulation. The overall index of family size (children per family) preference has dropped even below the level necessary to ensure simple parent generation replacement. This means that the prospects of depopulation have become apparent.

In the Tyumen province, the negative natural growth of the population was registered in the early 1990s only among the rural population in the south of the province. The geography of evident depopulation has not so far covered the territories of Khanty-Mansiiskiy and Yamalo-Nenetskii okrugs. There are grounds to assert that the population of the region on the whole has become involved in the process of reduction of family size through acceptance of the urban way of life, falling under the influence of the demographic behavior of migrants. Hence, aliens, together with a considerable part of the indigenous

population, are affected by the same forces which are causing the depopulation process, currently spreading in the western regions of Russia.

4. INDIGENOUS POPULATION IN THE TYUMEN NORTH.

The development of oil-and-gas complex in 1960s-1980s revealed a lot of demographic and social issues which did not receive positive solution by the present. One of the most sharp questions under discussion is the fate of indigenous population under the impact of industrial development of the remote northern regions of the Tyumen province.

4.1. TERRITORIAL AND ADMINISTRATIVE DIVISIONS.

According to the census of 1989 the total quantity of Nenets was 34,665, Khanty - 22,521, Mansi - 8,459, Sel'kups - 3,612.¹ Nenets live in Nenetsky autonomous okrug of the Archangelsk province, Yamalo-Nenetskii and Khanty-Mansiyskii autonomous okrugs of the Tyumen province, and Taimyr (Dolgano-Nenetskii) okrug of the Krasnoyarsk krai. Khanty live in Khanty-Mansiyskii and Yamalo-Nenetskii autonomous okrugs and in Uvat district of the Tyumen province. Mansi are settled in Khanty-Mansiyskii okrug and the north-east

¹ Gurvich and Sokolova (1991), p.8.

districts of Sverdlovsk province. Sel'kups live in Yamalo-Nenetskii okrug of the Tyumen province, Turukhansk okrug of the Krasnoyarsk krai, and some northern districts of the Tyumen province. In the bounds of the Tyumen province 65 percent of all Nenets, 90 percent of Khanty, 95 percent of Mansi, and 45 percent of Sel'kups live.¹⁴⁸

The administrative separation of the indigenous peoples preconditioned difficulties of their ethnic consolidation. In this light, Mansi live in better conditions of formal but juridical autonomy, whereas Sel'kups without any autonomy are citizens of three different administrative regions and have no real opportunity to maintain inter-ethnic contacts. The representatives of these three groups know each other only by hear-say. The situation of the inhabitants of the Tomsk province is very problematic. They are isolated from the main ethnic massive due to administrative barrier between the Tyumen and Tomsk provinces.

¹⁴⁸ Artyomov and Logunov (1992), p.55.

This situation, in combination with others, threatens ethnic existence of the groups occurring outside the basic national nucleus. In general, the notion of «indigenous people» is today as indefinite as never before. Statistical size doesn't reflect the true state of indigenous people, since the self-definition often is motivated more by formal and conjunctural reasons (for example, to have some privileges) than by real belonging to an ethnic culture. Administrative autonomy is not capable of securing true self-government.

Actually, autonomous okrugs have territorial-administrative rather than national status. Scattered settling among the overwhelming majority of the ethnic groups restricts the weak ties between the groups. Standard media, even the press and broadcasting in native languages do not substitute for direct mechanisms of ethnic-cultural communication.

The differences in the cultural potential of different groups of indigenous peoples are also apparent (in this case the potential means the standards of preservation of traditional economic

system, social norms, settling, cultural flavor and so on). These standards are quite high for further traditional (or post-traditional) growth among Yamal, Polar-Ural, Gydansky peninsula, Taz groups of tundra Nenets; Numtinsk-Purovsk group of forest Nenets; Voikar, Syn, Kunovat, Kazym groups of Khanty; Sosva-Lyapinsk group of Mansi; Upper-Taz group of Sel'kups. Due to a sharp reduction of the area of farms, the abundance of industrial developments, the forced migration movement, the Middle-Ob' group of Khanty, although strong in ethnic-cultural aspect, proved to be in danger. It may repeat the fate of Khanty of Nizhnevartovsk and Vasyuganye which are at the edge of depopulation.

Only the remnants of traditional culture have been preserved by moving to large settlements Khanty of Upper-Irtysh-Ob' and Alexandrovsk, Mansi of Konda, Sel'kups of Ob'.

At the same time, the destructive influence or inertia of state institutions towards the indigenous peoples may be also considered as a positive factor causing ethnic-cultural initiatives of the natives

themselves. In this light the formation of functioning communities in the districts where many natives have settled seems to be quite real. This opportunity is most feasible for tundra area, where the traditional culture has resisted extreme political pressure. Moreover, in the current ecological situation in the Tyumen North these communities in contrast to American-Canadian ones could be quite competitive, i.e. in the event of demonopolization the products of reindeers-breeding will occupy a favorable place on the growing market.

4.2. ECONOMIC, ETHNIC AND CULTURAL ISSUES.

The current ethnic and cultural situation in the Tyumen North is determined first and foremost by external influences on the indigenous population, such as:

- economic and political measures made by the Soviet administration, that have led to abolition or curtailment of public self-government; change of traditional production, territorial and religious structures; social leveling of the society with a sharp diminution of the status of personality;

- an actual encouraging of inactivity of teenagers in boarding schools and stimulation of grouping of the adult population in the field of public production and everyday life;

- geopolitical actions related to industrial, resource and transport development of northern territories; withdrawal of lands for the needs of defense and punitive institutions (zones of deportation of specific migrants, the system of GULAG and so on), that caused considerable reduction in economic lands, damaged bioresources, created the conditions for unregulated migration of newcomers and thus the indigenous population's deprivation of the right to possess or utilize their native territories.

The above-mentioned factors predetermined the break of the natural and social environment in which the traditional culture had existed and developed, especially its ecological and socio-normative sectors.

Ethnic utilization of nature and public relations was substituted by directly created administrative, economic and socio-cultural institutions. The introduced ideological and ethnic directions had very

little in common with traditional norms of conduct and systems of outlook of the northern peoples.

Under the aegis of the state the migrants implemented paternalistic approaches to the natives, introduced into the indigenous environment the so-called «Soviet mode of life,» or «internationalism.» The system of state education interrupted the mechanism of inter-generational cultural transmission and replaced it with the school of formal knowledge and disciplines.

The administrative measures on reorganization of the traditional system of farming had crucial negative results for the northern natives. Collectivization of production in the 1930s-1940s (the so-called «kollektivizatsia») and the following reorganizations of collective economies had transformed the economic structure of the Tyumen North towards a firm centralization of government. Thus, by the 1940s about 100 thousand households were united into more than 100 fishing and agricultural artels. In 1961 on the assumption that these collective farms were acknowledged as economically weak, 26 state farms

(«sovkhoz»), 6 cooperative state fur farms and 2 state hunting farms were established.¹⁴⁹ In 1976 14 state farms of Yamalo-Nenetskii okrug were included into a new industrial association «Yamal.» After that, the production rates of the traditional branches had decreased in comparison with the 1920s.¹⁵⁰ The economic degradation was accompanied by an increase in the administrative apparatus.

Since the end of the 1960s, under the impact of oil-and-gas development of the West Siberian North, departmental expansion was sharply intensified, traditional economic lands were uncontrollably alienated, the population's migration became unregulated. The traditional farms of the indigenous population were divided into separate branches, subordinate to different departments. The economic significance and consequently the status of the indigenous population had considerably diminished.

In the 1980s-1990s all the main sectors of vital activity of the indigenous peoples of the Tyumen North

¹⁴⁹ Gurvich and Sokolova (1991), pp.74-77, 154-155.

¹⁵⁰ Attyomov and Logunov (1992), p.78.

were characterized by destructive tendencies, crisis, and in a number of cases by already irreversible phenomena such as depopulation and extinction. In the field of traditional economy, the base of ethnic-cultural complexes, only 43 percent of the northern able-bodied population were working, among them about 17 percent in hunting, 13 percent in fishing, 11 percent in reindeer-breeding.¹⁵¹ From 1959 the ratio of those engaged in these fields had been reduced from 70 percent to 43 percent; the number of social service workers workers had slightly increased from 9 percent to 13 percent; the fastest pace of increase was persons engaged in unskilled and low-skilled manual labor in service fields, like cleaners, watchmen, loaders, assistant workers and so on (in 1959 their proportion was 12 percent, by 1979 it had increased to 30 percent).¹⁵² The ratio of this category in the industrial Khanty-Mansiyskii and Yamalo-Nenetskii okrugs reached 60 percent, and in some productive units - up to 90 percent.¹⁵³

¹⁵¹ Pika and Bogoyavlenskii (1989), p.12-13.

¹⁵² Slezkine (1994), p.374; Pika and Prokhorov (1988), p.80.

¹⁵³ Slezkine (1994), p.374.

This tendency went on into the 1980s. The aggregate number of the northern population involved in public production had decreased. Unemployment had turned from a slowly proceeding process (for example, seasonal unemployment) into a stable social phenomenon. For example, in Yamal district alone, in 1988 there were 344 unemployed Nenets, while in the whole of Yamalo-Nenetskii okrug more than 1.2 thousand natives were unemployed.¹⁵⁴

4.3. ENVIRONMENTAL ISSUES AND NORTHERN NATIVES.

The large-scale industrial development of the territories of the Tyumen North has been affecting the indigenous peoples' system of nature utilization in many aspects:

- alienation and destruction of reindeer-breeding pastures, hunting and fishing farms, cedar woods, berry-fields. The area of reindeer-breeding pastures throughout the whole of Russian North was reduced by 20 mn hectares (more than 100 thousand reindeers could be bred there), in particular, in the Tyumen North

¹⁵⁴ Tyumenskaya pravda, 1989, Jan. 15th.

this area was reduced by 11 mn hectares.¹⁵⁵ In Khanty-Mansiyskii okrug alone 28 spawning rivers, and 17.7 thousand hectares of spawning places were entirely eliminated, more than 500 thousand hectares of woods and pastures were lost.¹⁵⁶ From 1965 the area of fishing water reservoirs had been reduced 25 times, their number - 5 times. In Yamalo-Nenetskii okrug 28 rivers and dozens of lakes were spoilt¹⁵⁷;

- pollution of woodlands, fishing and hunting farms. From 1965 in Khanty-Mansiyskii okrug alone about 20 thousand hectares of fishing farms have been polluted; annually hundreds of accidents spilled at least 20-25 thousand tons of oil¹⁵⁸;

- in-migration of persons often having a criminal past, and growth of population with barbaric attitude toward nature have left their negative influence on the northern population (destruction of hunters' huts, property theft, extraction of fish and fur, making the population accustomed to drinking and so on)¹⁵⁹;

¹⁵⁵ Luzin (1991), p.18; Dahl (1990), p.24.

¹⁵⁶ Vitebsky (1996), p.99.

¹⁵⁷ Alexeev (1989), p.77; Forsyth (1992), pp.412-413.

¹⁵⁸ Luzin and Pozdhyakov (1992), p.165.

¹⁵⁹ Forsyth (1992), pp.392, 396; Dahl (1990), p.27.

- growth of the migrants' poaching, which entailed other negative consequences for the natives, for instance, prohibition of subsidiary fishing and hunting ¹⁶⁰.

A direct result of this ecological crisis is degradation of traditional sectors of the economy. The number of domestic reindeer has reduced by almost 20 percent from the end of the 1930s. The reduction of reindeer-breeding was also caused by the fact that state farms actually were not breeding reindeer. They liquidated even those reindeer they had received from collective farms. In 1930 in Khanty-Mansiyskii okrug there were 75 thousand heads of reindeer, in 1960 - 65 thousand, in 1978 - 54.4 thousand, in 1989 - 50 thousand heads.¹⁶¹

Negative effects were even stronger in hunting and fishing. In Yamalo-Nenetskii okrug the catch of fish has been reduced by 5 thousand tons during the last 20 years.¹⁶² The resources of fur-bearing animals and fish

¹⁶⁰ Slezkine (1994), p.372.

¹⁶¹ Gurvich and Sokolova (1991), p.177.

¹⁶² Artyomov and Logunov (1992), p.89.

are catastrophically exhausted. In view of this, the licensing of fishing and hunting and the limitation of hunting time are widely practised. For example, in the north of the Ob' river, Khanty, Mansi and Sel'kups are restricted in the fishing of salmon and sturgeon and hunting for elk and bear. Spring hunting was prohibited here by the decision of local authorities in several seasons, and the workers of hunting inspection took away hunters' guns for the period from the end of winter to autumn.¹⁶³

In recent years, state agencies are facing the ecological catastrophe, are attempting to protect nature. Often this is conducted in the form of awkward and non-motivated measures. For example, a reserve was established in the upper reaches of the Taz river, and the indigenous population was moved from its site, though even from an ecological and cultural point of view the indigenous population is not an obstacle but an indispensable component of such a reserve.¹⁶⁴ The campaign of establishing reserve zones implies the use

¹⁶³ Slezkine (1994), p.372.

¹⁶⁴ Artyomov and Logunov (1992), p.92.

of any measures (investments, organization of various committees, associations, councils) lacking only the primary task of ensuring a real right of property of the territory and its resources for the communities of the northern indigenous population.

Three decades of the growth of the oil-and-gas complex in the northern regions of Western Siberia have been related with increasing pollution and damaging of the natural environment, which have reached threatening proportions. The harmful industrial influence of the oil-and-gas-extracting industry on the natural environment is very diversified.

Geological survey and oil-extracting associations cause great harm to the region's woodlands in the course of laying tracks for geophysical crews' travel and laying of communication lines (roads, electric transmission lines, oil pipe-lines, gas-mains and so on). To build oil- and gas-fields an immense quantity of wood is felled; the majority is not reasonably utilized, but stays to rot at the places of felling or is burnt. Great woodlands are destroyed as a result of

flooding of oil, boring solution, and sewage, as well as of spring waters when laying roads and other communications without necessary draining systems.¹⁶⁵

By the beginning of 1985 the losses of timber related to the growth of the oil-and-gas industry were 16.7 mn cubic m. Every year the total of losses is increased by 2-3 mn of cubic m, so by the year 2005 it might reach 73.3 mn cubic m.¹⁶⁶ Great areas of woods suffer from fire, which has become more frequent because of industrial activity. The majority of fires are the result of breaking rules of fire security by the workers of the oil-and-gas and other branches of industry.

The polluting spills of oil, boring solution, unpurified sewage and chemicals utilized in the oil-and-gas industry cause great damage not only to the forest but to fauna, fish resources and to the environment in general.

The oil industry is the leading one as regards pollution being outstripped only by metallurgy.¹⁶⁷ In

¹⁶⁵ Alexeev (1989), pp.77-78.

¹⁶⁶ Luzin and Pozdnyakov (1992), p.133.

¹⁶⁷ Feshbach and Friendly (1992), p.137.

the Tyumen North the enterprises of the oil-and-gas industry alone had polluted air and surface with 14,133 tons of harmful substances over 1986-1990; that is 10 percent of the aggregate amount of pollution by Russia's industry and 99.99 percent of pollution had not undergone any purification.¹⁶⁸ The ratio of sewage to the surface water reservoirs had reached 2.44 bn cubic m over the same period, merely 31.5 percent of them were purified.¹⁶⁹

According to the data available, the annual losses of oil because of pipeline leaks and numerous accidents at the oil-fields accounted to more than 1 mn tons that exceeds the amount of oil spilled during the catastrophe of «Exxon Valdez» near Alaska coast about 40-50 times.¹⁷⁰ Gas leaks also considerably damages the environment. According to calculations made by Siberian economists, only under the impact of burning of oil-accompanying-gas on the torches of oil-fields 35 bn cubic m of oxygen (or 25 mn tons) are

¹⁶⁸ Okhrana okruzhayushei sredy... (1991), pp.3, 8, 37.

¹⁶⁹ Logunov (1997), p.54.

¹⁷⁰ Feshbach and Friendly (1992), p.138; Luzin and Pozdnyakov (1992), p.133

removed from the atmosphere, and instead of it, 18-20 bn cubic m (or 35-40 mn tons) of harmful substances, like carbon and nitrogen oxides including cancerous substances are emitted.¹⁷¹

The active technical effects on the natural environment and, in particular, immense spills of polluting substances, have extremely negative effects on the traditional kinds of economic activity of the northern indigenous peoples, Khanty, Mansi, Nenets and others. In Khanty-Mansiyskii autonomous okrug the amount of reindeer livestock, and fish are annually diminished, and preparation of fur is sustained mainly by means of domesticated fur breeding.

In Yamalo-Nenetskii okrug the amount of reindeer live-stock had been increasing until recently mainly due to the growth of reindeer-breeding collectives and state farms on the Yamal peninsula. However, in view of the planned expansion of the gas industry on the peninsula the conditions for the growth of reindeer-breeding here are becoming worse.

¹⁷¹ Starovoitov (1991), p.13; Luzin and Pozdnyakov (1992), p.133.

Thus, should the current tendencies continue, complete degradation of the traditional kinds of economic activity of the northern natives of Western Siberia, will occur, which might have extremely negative results on the further fortune of the natives themselves, on their mode of life and their ancient unique culture.

Certainly, not only the shortcomings of the political-administrative actions of recent decades have caused the crisis of the base of the northern peoples' vital activity. De-ethnization was the result of a series of measures taken by the Soviet power that had established a complicated system of inter-ethnic relations. To overcome this system today proved to be a very difficult task. In the 1920s, in the process of nationalization of the lands, the indigenous population was deprived of their property, afterwards, in years of collectivization it was deprived of basic production means and products. The destruction of the system of land-owning and property relations were assisted by mass punitive acts, the repressive measures of suppression of national movements in the

1920s-1940s. This caused migrations of the population and social and psychological chaos. Nationalization of land and of the population had deformed the mechanism of traditional culture.

Introduction of a general school education and universal military service for the northern indigenous population proved to be harmful for traditional cultures. Boarding schools and education programs foreign to ethnic cultures had broken the mechanism of inter-generational transmission of experience. The generation of the natives educated in boarding schools had lost many elementary skills of vital activity (like to orient oneself on the ground, to select and develop trading farms, breeding of cattle and so on).¹⁷²

In the traditional model young men had acquired cultural maturity and ability to function by the age of 14-15. In the new situation a man learned the traditions in case of his return to the traditional cultural environment at a minimum age of twenty.¹⁷³

¹⁷² Slezkine (1994), p.374; Forsyth (1992), p.400.

¹⁷³ Gurvich and Sokolova (1991), p.103.

Administration measures towards the northern peoples did not have equal destructive influence on their ethnic fate. In some case a complete de-ethnization (for example, of southern Sel'kups, Khanty, Mansi) was the result of the Soviet national policy, in other cases it was a change of culture due to the decay of trade (for example, some groups of northern Sel'kups), in still other cases it was a covert opposition (sometimes even overt conflict) to the novelties of native life (as was the case of tundra Nenets, northern Khanty).

This confrontation was most vividly manifested in numerous attempts to transfer nomadic people to a settled way of life. Despite many enactments of the Communist Party and government concerning this situation they failed to completely eliminate the production nomad life of the natives. The reindeer-breeding culture has resisted administrative pressure. In the middle of the 1980s, 2133 families numbering 10,439 people led a nomad life.¹⁷⁴ This was more than a

¹⁷⁴ Tyumenskaya pravda, 1986, March, 17th.

third of the aggregate quantity of the rural indigenous population of the Tyumen North. It is this environment that has preserved the traditional cultural complexes and is characterized by positive demographic and economic tendencies.

Industrial development of the Tyumen North had undermined the natural base of functioning of the traditional trades of the native peoples - Khanty, Mansi, Nenets, Sel'kups, and essentially changed the demographic situation in the territory of the aborigines of the North. Their members proved unable to adapt to new kinds of economic activity were psychologically weakened by an increase in the illness and alcoholism and faced the danger of ethnic degeneration.

Despite a slight increase in their number in the 1980s due to an increase in the birth-rate by 12.6 percent in comparison with 1979, the population of the aboriginal nations of the North continued to evolve into a small ethnic minority. In 1979 they constituted 16.1 percent of the population of Yamalo-Nenetskii

okrug and 3.3 percent of Khanty-Mansiyskii one.¹⁷⁵

According to the data of the census of 1989 these estimates were 6.0 percent and 1.5 percent respectively.¹⁷⁶ The tendency toward decreasing the share of indigenous people in the total population is characteristic for the majority of northern regions of the Russian Federation (see table 20).

The changes in the ethnic composition of the population in the 1980s, the increase of the majority of nationalities living in the region, except for the Russians, are capable of influencing the character of international relations in the future. To a certain degree, a number of contradictions of an international nature have been already revealed. These are the claim of aborigines for the return of their right to exercise control over the resources of the territories they had occupied before industrial development of the region, their strong protest against Russification of their children, as well as the first signs of aggravation of relations between the Russian-speaking

¹⁷⁵ Tyumenskaya oblast' v tsifrakh (1981), p.16.

¹⁷⁶ Natsional'nyi sostav naseleniaya... (1990), pp.91-92, 1722-173.

Table 20

Change in the ethnic composition of population
in different regions of the Russian North, percent

Regions	Share in the total population					
	Indigenous peoples			Russians		
	1970	1979	1989	1970	1979	1989
Komi republic	28.6	25.3	23.3	53.1	56.7	57.7
Buryat republic	22.0	23.0	24.0	73.5	72.0	70.0
Yakut republic	43.0	36.9	33.4	47.3	50.4	50.3
Nenetskii okrug	15.0	12.8	12.0	64.5	65.8	65.8
Yamalo-Nenetskii okrug	32.4	16.2	6.1	46.9	59.0	59.2
Khanty-Mansiyskii okrug	7.3	3.2	1.6	76.9	74.3	66.3
Evenkiiskaya oblast'	26.7	21.6	15.3	61.1	65.1	67.5
Taimyrskii okrug	20.5	17.3	15.7	66.9	68.2	67.1
Koryakskii okrug	28.1	24.6	25.1	63.2	64.2	62.0
Chukotskii okrug	13.3	9.9	9.8	69.7	68.9	66.1

Source: Natsional'nyi sostav naseleniya RSFSR. Po dannym Vsesoyuznoi perepisi naseleniya 1989 g. M., 1990, pp.102-153.

population of the southern districts and the Siberian Tatars, having declared their sovereignty.¹⁷⁷

All this requires that we thoroughly consider the results of the changes in the ethnic composition of the region's population. Of vital importance is the elaboration of the measures aimed at the preservation and comprehensive development of the national cultures of aboriginal nations (Khanty, Mansi, Nenets, Sel'kups, Siberian Tatars) as well as of the nations living there over several centuries - the Russians, the Ukrainians, the Belorussians and others, and removing possible causes of international conflicts.

4.4. PROBLEMS OF REPRODUCTION AMONG INDIGENOUS POPULATION.

The most acute ethnic-demographic problem of the Tyumen North in terms of population change is that reproduction of northern natives is accompanied by a high death-rate which considerably exceeds the death-rate of migrants. The death-rate is a minimum of 2-4 times, and in some northern regions the death-rate of

¹⁷⁷ Artyomov and Logunov (1992), p.107.

higher than that of the Russian population.¹⁷⁸

According to some estimates, it reached 38-57 per 1,000 population.¹⁷⁹

The study of the life expectancy of northern natives reveals a considerable concern of both male and female estimates in comparison with average Russian estimates (see table 21). On the whole, male life expectancy is 10 years shorter and female is 9 years shorter. The analysis of coefficients of infantile death-rate most vividly shows the fluctuation in coefficients of death-rate of northern indigenous people.

A particular place among sexual and age estimates is occupied by the death-rate of children under 1 year. These estimates supply the most adequate idea of the backwardness of northern regions from the whole Russia by the majority of socio-economic estimates.

In Russia on the average, 17-18 children per every 1,000 new-born ones die at age under one year, whereas in the North this figure is 19-20 children and among

¹⁷⁸ Gurvich and Sokolova (1991), p.11; Slezkine (1994), p.375..

¹⁷⁹ Forsyth (1992), p.401.

Table 21

Life expectancy of population in different
regions of the Russian North in 1989, years

Regions	Total population		Indigenous people	
	Males	Females	Males	Females
Russian Federation	64.5	74.4	54.0	65.0
Tyumen province	64.6	75.0	54.2	67.2
Krasnoyarskii krai	63.0	73.4	49.4	60.5
Khabarovskii krai	62.4	72.9	53.8	66.3
Kamchatskaya province	60.2	71.2	54.5	64.4
Magadanskaya province	62.8	71.5	51.4	58.1
Yakut republic	63.4	71.5	61.2	69.8

Source: Perspektivy socio-kul'turnogo razvitiya
Rossiiskogo Severa. Nauchnaya kontseptsiya.
Ekaterinburg, 1992, p.118.

small nations there are 30-40 deceased children per 1,000.¹⁸⁰ In 1990 the average infantile death-rate of the indigenous people of the Tyumen North was 33.6 deceased per 1,000 born children, 32.0 among Nenets, 34.9 among Khanty.¹⁸¹

In comparing the infantile death-rate of separate nationalities it may be noticed that non-indigenous population conditions are better than those of the northern natives. At the end of the 1980s, i.e. after a considerable reduction of the infantile death-rate, the difference, however, remained about 3-4 times.¹⁸²

The higher death-rate in the North in comparison with Russian one is caused by the extremely high death-rate of indigenous population. Accidents, poisoning and traumas are the prime causes of death of the natives. The average ratio of lethality from accidents and traumas is 15 percent of the total number of the deceased in the general population, but in the indigenous people it fluctuates from 40 percent

¹⁸⁰ Gurvich and Sokolova (1991), p.11; Granberg (1991), p.16.

¹⁸¹ Rybakovskii (1993), pp.102-103; Luzin and Pozdnyakov (1991), p.87.

¹⁸² Artyomov and Logunov (1992), p.114.

to 60 percent.¹⁸³ Death from trauma and accidents takes place mainly among the able-bodied. The losses from trauma are so great that by eliminating them the life expectancy of the natives might immediately be prolonged by 10-11 years.¹⁸⁴ The death-rate of the indigenous population is also both directly and indirectly affected by alcoholism. Recently, because of an immense supply of alcohol via numerous commercial sources, the situation has become especially acute. As a result, the average male life expectancy of the northern natives doesn't exceed 45 years, the female one - 55 years old.¹⁸⁵

The structure of maternal and infantile death-rates testifies that it is the health services that are responsible for such a situation. Almost everywhere in the North availability of beds, both medical and obstetric, is larger than in the whole of Russia. At the same time providing with doctors, in particular, with obstetricians-gynecologists, is much lower. Infant health care is even more poorly

¹⁸³ Gurvich and Sokolova (1991), p.257; Forsyth (1992), p.401.

¹⁸⁴ Granberg (1991), p.16.

¹⁸⁵ Forsyth (1992), pp.401, 413; Slezkine (1994), p.375.

developed. Analysis shows that low standards of the development of obstetrical-gynecological and pediatric aid are the decisive cause of lethality in the region, being higher than in the whole Russia.

Comparison of data on natural movement of some nationalities in the North leads one to draw a conclusion that it is not low birth-rate of the indigenous people that is the main cause of their extinction and degradation. Thus, Khanty has a general coefficient of birth-rate around 35 percent, Nenets - 37 percent.¹⁸⁶ None of Russia's national republics has such a high estimate.

Two aspects should be distinguished in the problem of the survival of indigenous people of the North. Firstly, it is the dynamics of their quantity, that to a great degree depends on the proportion between birth-rate and death-rate, since the migrational activity of these nations is low. High death-rate of the natives, considerably exceeding that of Russian and of other nationalities remains the most acute problem.

¹⁸⁶ Rybakovskii (1993), pp.64-65.

However, according to estimates of natural increase of the separate nationalities living in the Tyumen North, the differences in death-rate are lower than those of the birth-rate, and the total reproduction balance of the natives proves to be higher. The natural increase of Nenets is almost three times higher than that of Russia.¹⁸⁷

The second aspect of the problem is the assessment of the role of small northern nations in the reproduction and dynamics of the total numbers of the region's population. Changes in the size and ethnic structure of the population indicate that the parameters don't depend on the rate of natural increase of these nationalities. Considerable advantages achieved due to a higher rate of reproduction of the natives are nullified by immigration.

In this situation, even in the case of an active increase of less numerous northern peoples, their ratio in the population of the North will be inevitably falling. The data from table 22 show that

¹⁸⁷ Artyomov and Logunov (1992), p.117.

Table 22

Main ethnic groups in different regions of the Russian North in 1989 (1970 = 100 percent)

Regions	Total	Indigenous peoples	Russians	Other ethnic groups
Komi republic	129.5	105.8	141.0	133.9
Buryat republic	127.8	139.1	121.6	175.0
Yakut republic	164.8	127.6	175.2	279.7
Nenetskii okrug	137.8	109.8	140.7	215.4
Yamalo-Nenetskii okrug	618.7	115.3	780.4	1,416.3
Khanty-Mansiyskii okrug	472.9	98.8	407.8	1,585.8
Taimyrskii okrug	146.6	111.1	147.0	540.1
Koryakskii okrug	129.2	114.9	126.9	660.9
Chukotskii okrug	162.0	111.3	153.5	349.6
Okruzs total	369.2	109.7	345.2	1,114.4

Source: Tschislennost' naseleniya RSFSR po dannym

Vsesoyuznoi perepisi naseleniya 1989 goda. M., 1990, pp.302, 304, 306-310, 312-314, 318, 321, 323; Itogi Vsesoyuznoi perepisi naseleniya 1989 goda.

Natsional'nyi sostav naseleniya Tyumenskoi oblasti. Tyumen, 1990, pp.10, 91-92, 172-173.

the pace of increase of indigenous population in the majority of the regions of the Russian North was much more less than that of total population, the Russians, and other ethnic groups.

Certainly, an active increase of their quantity is out of the question, since the majority of these nations are not numerous, while the alcoholization of an adult population causes an extremely high death-rate of the present generation as well as of the following ones.

The tendency toward small-size families has had an ongoing impact on the indigenous population of the North. Complete movement in this direction could certainly be a tragedy for those people. Spreading of the small-family way of life is so far being opposed by the resistance of families of the indigenous population of the North to alien social and cultural influences. The number of the Sel'kups in the autonomous okrugs of the Tyumen province arouses most alarm. In 1970, the Sel'kup population in the Yamal

was 1,710 people, and in 1979 and 1989, 1,611 and 1,530 people, respectively.¹⁸⁸

The Mansi population is unstable. The Khanty and the Mansi are more consolidated. In 1989 the overall birth rate per woman among the indigenous residents of the North had dropped to the level of simple population reproduction, being but slightly over the critical line.

Investigation of the children-per-family rate and fertility expectations in the Yamalo-Nenetskii okrug in 1988-1990 found that towards the end of reproductive age the average number of children per married woman was 4.3 in the Nenets families and 2.1 in the Russian families. On the average, the desired number of children per marriage was: 4.4 for the Nenets, against 3.5 planned by a family; 3.7 and 3.6, respectively, for the Khanty; 3.1 and 2.9 for the Mansi; and 2.6 and 2.1 for the Russians.¹⁸⁹

In 1990 these numbers became even further apart. It was in that period that the direct link between

¹⁸⁸ Natsional'nyi sostav naseleniya... (1990), pp.18, 35-36.

¹⁸⁹ Artyomov and Logunov (1992), p.119.

dissatisfaction with life became evident. The average desired number of children per woman was 3.0, against the planned number of 2.1; while in families dissatisfied with their conditions of life the figures were 2.7 and 1.9, respectively, or below the level of simple generations replacement. In general, indigenous families of the North tend toward medium size families of three to four children. The maximum family size corresponds to the national type of dwelling and adherence to the mother tongue (4.6 children in indigenous families against 2.5 in fully Russian-speaking families).¹⁹⁰

This regularity may be viewed in the 1989 census data. The more people are faithful to the national language as their mother tongue, the less problems there are with low reproducibility tendency and the size of the family. The Khanty and the Nenets keep to the relation about 65-66 percent. Approximately 36.7 percent among the Mansi, and 47.7 percent among the Sel'kups have the same tendency.¹⁹¹

¹⁹⁰ Artyomov and Logunov (1992), p.121.

¹⁹¹ Itogi Vsesoyuznoi perepisi naseleniya... (1990), pp.176-177.

According to the census data, the family resistance to external influences is particularly strong in the rural areas of the Tyumen North. Average size of a household in the urban area of the Khanty-Mansiyskii okrug, in all groups of the population, is only 2.8; among the Mansi, 3.1 (which is below the average); among the Khanty, 3.4. In Yamalo-Nenetskii okrug, the Khanty families living in the urban area are smaller, having an average size of 3.1; the Sel'kup families' size is 2.9, which means that the family is either incomplete, or has no children.¹⁹² In the rural areas of the Tyumen province the situation is different: families are more complete and developed (see table 19).

It may be clearly seen from the data that even in rural areas of the Tyumen North, the conditionally Slavic population (Russians, Ukrainians, Belorussians) are oriented to urban-type small-size families; most numerous are the medium sized with a few larger sized national households among the indigenous population. The larger and medium sized orientation might lead to

¹⁹² Itogi Vsesoyuznoi perepisi naseleniya...(1990), pp.189-190.

considerable growth and development of the indigenous peoples of the North, if it were not for the high mortality rate, assimilation rate and alcoholism.

Analysis reveals a high correlation between larger sized households among the indigenous population of the North, not only on the migratory situation and separated families, but also on alcoholism. The strongest «drinking» orientation is noted among the larger sized families: 6.6 childbirth expectancy in families with everyday drinking; 4.5 where drinking occurs 3 to 4 times per week; 3.3 where the occurrence is 3 to 4 times per month; and 3.2 for an occurrence of 1 to 2 times per month.¹⁹³

Larger sized families also suffer from many intermarriages between natives and non-natives, whose number constantly grows in the cities and settlements located away from the peripheral villages and nomads' camps. In 1990, the share of heterogeneous families among the Nenets between 20-29 years, was 26.5 percent, among the Russians, 52.9 percent.¹⁹⁴

¹⁹³ Nesterova (1993), p65.

¹⁹⁴ Artyomov and Logunov (1992), p.125.

Thus the larger sized family culture of the indigenous peoples of the North has been suppressed in urban-type settlements. It was that cultural feature that formed the natural basis of the nation's survival and reproduction over time. Particularly alarming is low reproduction rates among the Komi, Mansi, and Sel'kups. Taking into account the mortality rate among the indigenous population, we have every right to speak of the real threat of depopulation.

Regretfully, there are no mortality rate tables calculated for the indigenous population of the Tyumen North based on scientifically substantiated techniques. Multiple references,¹⁹⁵ however, indicate that the average life expectancy for men is 44-49 years. Mortality rate table calculation using regular standard techniques is impossible, and here we have to deal with «cohort» calculation using the method of real generation's study. The data thus obtained allow us to assert that the maximum mortality rate among the indigenous population of the North is observed among men of the 30-34 years age group; in the countryside,

¹⁹⁵ Forsyth (1992), p.413; Slezkine (1994), p.375.

among the 25-29 years age group; while among the Russians the mortality rate maximum falls on the 50-55 age group, and in the countryside, on the 60-64 years age group. The maximum mortality rate among women everywhere is over 70 years of age.¹⁹⁶

These data are directly correlated with the higher infant mortality rate due to infections and parasites, poisoning, traumas and accidents, and suicides, and are officially confirmed. The historical pattern of diseases among the peoples of the North merges with the historical pattern of the causes of death (see table 23).

With respect to cardiovascular, digestive, dermal, bone, muscular system and other «civilized» diseases, the indigenous population appears to be in a better position (excluding rheumatism). Specific attention, however, should be paid to tuberculosis, enteric infections, blood and hematopoietic organ diseases, and mental disorders (generally, induced by alcoholism). This morbidity pattern does not comply with the high life expectancy thresholds. The

¹⁹⁶ Estestvennoe dvizhenie i migratsiya...(1995), pp.70-72.

Table 23

Disease cases in the Tyumen province
classified by types, per 1,000 population

Disease types	Total population (1990)	Indigenous population of the North				
		1975	1979	1988	1990	
					including	
					YaNAO*	KhMAO**
Infections and parasites	78	119	212	187	175	240
Venereal diseases	1.7	3.5	3.8	0.8	1.9	1.4
Helminthiases	25	50	88	100	-	-
Tumors	13.1	1.2	1.8	3.0	3.7	5.0
Endocrine system diseases, malnutrition, metabolism disorders	11	2	4	5	-	-
Mental disorders	48	6	16	80	128	45
Accidents and traumas	81	50	57	44	59	53

*Yamalo-Nenetskii autonomous okrug

**Khanty-Mansiyskii autonomous okrug

Source: Osnovnye pokazateli razvitiya sistemy
zdravookhraneniya Tyumenskoi oblasti. Tyumen, 1991,
pp.46, 49, 55.

unfavorable balance of infant mortality rate is preserved, being 2 - 2.5 times higher than the average mortality rate for the Tyumen province.

Despite the tendency towards decrease in the mortality rate, this indicator of the demographic and socio-economic decline of the population still remains high enough. In 1970-1987, the infant mortality rate in the Tyumen province decreased on the whole from 30 to 22 cases among infants under one year of age per 1,000 births.¹⁹⁷ Among the Khanty, the dynamics was different: from 88 to 43 cases; among the Nenets, from 96 to 47; among the Mansi, from 97 to 23; while among the Sel'kups, the infant mortality rate grew from 42 to 48 cases.¹⁹⁸

The entire region exhibits a high rate of suicides. In 1989, in the urban areas of Khanty-Mansiyskii okrug, there had been registered 20.8 suicide attempts with fatal outcome (246 cases in all) per 100,000 population; and 16 (193 cases) in the subsequent year.¹⁹⁹ The number of suicides is hard to

¹⁹⁷ Estestvennoe dvizhenie i migratsiya...(1990), p.22.

¹⁹⁸ Ibid, p.24-25.

¹⁹⁹ Artyomov and Logunov (1992), p.126.

predict. It is important to note that the number of murders over the same period of time exceeded the number of suicides 1.3 times, which is unusual for the territories of the Urals and Siberia, but quite common for the Transcaucasian and the majority of so-called «Moslem regions.» In the rural areas the figures were 51 and 29 cases, respectively.

In the period between 1989-1990, suicides in the urban areas of the Yamalo-Nenetskii okrug stayed at the level of 16-17 cases per 100,000 population; in the rural areas, this level was noticeably higher: 21-34, and everywhere the immense prevalence of suicides among males was observed: up to 97 percent of the total number in cities, and from one-sixth to one-tenth of the total number in the countryside.²⁰⁰ The latter indicates the social influence on the male population in the most «suicide-minded» age groups. On the whole for the Tyumen province, the rates of suicides were 20-21 percent in cities and 37-35 percent in the countryside. The higher suicide rate in rural areas may be partly explained by the high

²⁰⁰ Artyomov and Logunov (1992), p.128.

level of suicides among the indigenous population of the North, as well as by the marginal nature of the population in the newly settled areas.

The high mortality rate is in no way indicative of depopulation. It may be looked upon as a temporary indicator of the possibility of potential population extinction. With regard to stagnation and decrease in the average life expectancy, the same phenomenon had been observed among the whole of the Russian population over the last thirty years. In this case it makes sense to compare the life span indicators with European standards. The high mortality rate is the disgrace of the whole country, and not just of its North. For national minorities with critical masses of population the disbalance between the birth and mortality rates may really present a threat of extinction. The high mortality rate and the historical disease pattern affects social conditions, impeding progress of national minority groups along the way of demographic transition, enhancing the threat of their extinction in a much shorter historical period than of

any of the bigger populations. The same refers to the incomplete epidemic transition of the aborigines.

As a matter of fact, no real policy aimed at bringing the indigenous population of the North to extinction had ever been pursued. One would agree that as applied to this population it was rather the tactics of «soft» genocide implemented through internationalization of their life, culture, marriage and family. It was not by chance that the 1989 census data disclosed a decline in the use of the mother tongue as compared to earlier data. Such a policy had been aimed at merging one nation with the other, a smaller ethnic group with the bigger one. Thus the problem of «extinction» of the smaller nations of the North is not solely demographic. It has a strong socio-political and cultural aspect. It is more a problem of ethnic and cultural degeneration.

4.5. SOCIAL CLIMATE IN THE REGION AND RELATIONSHIP BETWEEN INDIGENOUS PEOPLE AND MIGRANTS.

Under transition to a market economy, residents of the North found themselves much less protected in many respects than residents of many other regions of

Russia. According to an investigation conducted in 1991-1992 in a number of regions of the Tyumen North, chiefly in Yamalo-Nenetskii okrug, that was clearly realized both by the indigenous population and the immigrants. Residents of the investigated regions, however, differed in the interpretation of their unprotected situation.

In the opinion of all respondents, it was not the result of the crisis presently observed in the country, since its presence had been noted already 10 years ago. The impact of the overall crisis in these regions manifested itself in the degree of dissatisfaction with conditions of life (in the broader sense of the word), which has grown recently (table 24).

This is specifically noticeable in comparative estimates of their housing conditions and amenities, medical services, working conditions, availability of child-care facilities, and opportunities for leisure-time and holidays.

The complications of the social and economic situations noted in responses from the majority of

Table 24

Negative estimates of life conditions
in the North 5-10 years ago and at present
by indigenous population and in-migrants in
Yamalo-Nentskii okrug, percent

Conditions of life	Indigenous population		In-migrant population	
	5-10 years ago	at present	5-10 years ago	at present
Housing conditions	44.1	65.7	45.7	69.9
Child-care facilities	28.4	48.3	31.1	46.5
Medical service	40.5	66.3	41.8	68.0
Recreation facilities	44.2	71.8	42.8	81.1
Living conditions	51.1	70.1	49.2	77.8
Consumer goods supply	34.1	72.3	24.8	79.6
Food supply	30.5	67.5	25.4	77.5
Education opportunities	27.1	53.1	34.4	64.2
Working conditions	28.0	46.9	27.4	49.6
Wages and salaries	27.5	57.3	20.2	59.0
Environmental conditions	29.6	45.1	26.8	46.3

Source: sociological survey conducted in 1991

respondents defines the present material conditions of residents of the North. It is worth notice that considerable divergence in assessment of their own conditions is observed in the responses given by the indigenous population and the in-migrants.

Among the indigenous population groups, the share of respondents having «money barely enough to buy food» is much greater (68 percent on the average) than among the in-migrants (58 percent on the average). Conversely, the share of those who «can afford to deny themselves nothing» and «have enough money to buy necessary foodstuffs and clothes» is higher among the in-migrants than among the indigenous population (45 and 32 percent of respondents, respectively).

Low level of material well-being is assessed by the majority of respondents as a relatively stable situation. Not more than 11 percent of respondents expect their material situation to improve in the years to come; 15 to 35 percent expect it to become worse; 23 to 33 percent think that no changes are to be expected. Most pessimistic expectations are observed among the in-migrants.

The situation becomes even more negative with the possibility of unemployment: 23.2 percent of the indigenous population and 43.5 percent of the immigrants worried with the prospects of losing their jobs. Over half of the respondents think that in case they lose their job a new job will not be easy to find. Representatives of the indigenous population of the North have a more pessimistic view of their future job prospects.

The difficulties in finding a new job in case of dismissal may be due to both objective and subjective reasons. Among the objective reasons, the relative job market saturation is named. In the opinion of the majority of respondents, the North needs additional jobs. On the average, 62 percent of respondents in both compared groups agree to this point of view. Thus the regional differences, the genetic composition of the populations have extremely little influence on the unanimity of opinions on the matter in question.

Aggravation of the economic and social crisis in the regions of the North determines prevalence in the responses of residents of Yamalo-Nenetskii autonomous

okrug of equally negative estimates of both the various aspects of life and the prospects of future development of the North (table 25).

In the set of data presented in this table, a considerable share of respondents is unable to give a definite answer with regard to the prospects of development of the North. It is almost every second or every fourth respondent in the indigenous population and in-migrant groups, respectively. Obviously, the difficulty in giving estimates arises from the complexity and scale of the problem. It is natural to suppose that such a position assumed by the respondents is essentially the reaction to the contradictory and unpredictable situation in Russia on the whole, and in its northern regions in particular.

«Optimists» among the residents of the Yamalo-Nenetskii okrug, in the indigenous and in-migrant population groups whose estimate of the prospects of the North development was «very good» or «good», are 11.4 and 15.9 percent, respectively.

Table 25

Evaluation of prospects of the development of the North by indigenous population and in-migrants in Yamalo-Nenetskii okrug, percent

Estimated by respondents	Indigenous population	In-migrant population
Very good	3.3	6.1
Good	8.1	8.8
Satisfactory	22.2	26.5
Bad	11.1	15.6
No prospects at all	7.1	19.7
No definite answer	48.5	23.1

Source: sociological survey conducted in 1991

One of the important indicators of the specific situation observed in the regions of the North is the nature of relations between the indigenous and in-migrant population. Its importance is confirmed by the present practical development of the Russian Federation, since these relations are a prerequisite to maintaining its integrity and the nature of interrelations between its subjects.

The crisis in the social and economic sphere and the abrupt stratification of society provoke social tension between the indigenous and the in-migrant populations of the North. Agreement by the indigenous and in-migrant populations of the importance of a number of factors separating people today allow us to evaluate each of the factors as average for the regions of the Tyumen North. In the opinion of the respondents in the indigenous and in-migrant population groups, people differ in the importance of their material welfare: 31 and 27 percent, respectively; official status: 17 percent in both compared groups; nature of their labor (mental, manual): 12 and 15 percent, respectively; and finally, place of residence (city, country): 11 and 14 percent of respondents, respectively. National origin ranks only 4th or 5th in the hierarchy of factors, or reasons for people's differences. On the average, its importance was noted by 9 and 6 percent of respondents in the compared population groups.

People's different views for any of the above reasons provoke social tension, which, under certain

conditions, may be transformed to national tensions. In the Tyumen North, the indigenous (by title) and the alien (in-migrant) groups of the population appear as opposing groups. In characterizing the relations between these groups of population, a great number of respondents in Yamalo-Nenetskii okrug described them as «tense to a certain degree» or «very tense», and «fraught with conflicts»: 39 percent among the indigenous, and 42 percent among the in-migrant population (see table 26). It should be noted that indigenous population consider the relations between the indigenous and in-migrant groups of the population in the North more disquieting than in-migrants (see table 27).

Social tension progression to international tension may arise from the specific character of mass consciousness, spreading in people's minds of the negative national stereotypes and prejudices, and hence, the lack of culture of international relations.

Polls have shown that prejudices and negative national stereotypes are widespread in people's minds. In the opinion of 13 percent of respondents in the in-

Table 26

Relations between indigenous and in-migrant population in Yamalo-Nenetskii okrug, percent

Estimated by respondents	Indigenous population	In-migrant population
Relations are stable and problem-free	54.0	37.3
A certain degree of tension is present	35.0	38.0
Strong tension, fraught with conflicts	4.0	4.0
No definite answer	7.0	20.7

Source: sociological survey conducted in 1991

Table 27

Reasons causing tension in relations between indigenous and in-migrant population, percent

Estimated by respondents	Indigenous population	Immigrant population
Economic situation, differences in wages	8.3	19.4
Lack of culture in international relations	25.0	29.9
Indigenous peoples' rights infringement	37.5	17.9
National character of peoples of the North	8.3	4.5
Northern nature depredation by in-migrants	20.8	25.4
No definite answer	0.0	3.0

Source: sociological survey conducted in 1991

migrant population group, tension in relations between the indigenous and the in-migrant residents of the North is caused by the specific features of the national character of the indigenous people of the North. From the point of view of 21 percent of the indigenous population, predatory attitude to nature is often closely related to the character of the in-migrants. The fact that representatives of the in-migrants (25 percent of all respondents) noted the same feature in themselves only confirms the objective and sufficiently grounded reason for the said prejudice building up in the indigenous population of the North.

The lack of tolerance toward other cultures, in the opinion of respondents in the compared groups, is revealed in a number of aspects:

- attitude towards learning the languages of the indigenous peoples and the Russian language, as a condition of international communication. According to poll data, the number of indigenous residents convinced of the necessity for all residents of the North to know, along with the Russian language, the

indigenous people's language is four times larger than the number of sharing the same point of view: 23 and 6 percent, respectively;

- attitude towards the national cultural environment. The degree of readiness to work at mutual understanding between cultures as a prerequisite to complete understanding, and hence, to bringing down tensions between the people, is, on the average, 1.5 times higher in the indigenous population than in the in-migrant population.

It should be noted that tension in relations between the indigenous and the in-migrant residents of the investigated region, predetermined by the lack of tolerance of other cultures, noticeably affects the feeling of social security in the in-migrant population.

In the opinion of almost four percent of respondents from the in-migrants, lack of knowledge of the language and customs of the indigenous population, and demonstration of ill-will on the part of the local population, when added to other factors, are the reasons for the in-migrants in the northern regions of

the Tyumen province to leave. It is clear that prevalence in the North of in-migrants calls for pursuit of a carefully considered and civilized national policy.

This policy should take into account the interests of national revival of the multiple peoples of the North, on the one hand, without alienation of the in-migrants forming the body of the labor and production potential, on the other. Otherwise, the ethnic and cultural opposition may become another source of social tension between the indigenous population and the in-migrants in the North.

In recent years, many scientists and politicians have become seriously concerned with the prospects of loss by the indigenous population of the North of their ethnic culture. To find out the degree of similar concern among the population of the North, they were asked a question: «Is there, in your opinion, a danger that the original culture of the people of the North may be lost?» (see table 28).

The poll data show that a considerable part of the indigenous population and the in-migrants are

Table 28

Idea of the danger for indigenous people of the North to lose their original culture among the indigenous and in-migrant population of Yamalo-Nenetskii okrug, percent

Estimated by respondents	Indigenous population	In-migrant population
There is real danger	67.7	42.5
There is a danger, but it should not be overestimated	10.4	26.1
There is no danger	5.2	7.8
Never gave it a thought	5.2	12.4
No definite answer	11.5	11.1

Source: sociological survey conducted in 1991

concerned with the problem. The danger for the people of the North to lose their original culture was identified by 67.7 percent of the indigenous residents and 42.5 percent of in-migrants.

Danger was realized but considered overestimated by 10.4 percent of indigenous and 26.1 percent of in-migrant respondents. And only 5.2 percent of

indigenous and 12.4 percent of in-migrant residents responded that there is no such danger for the indigenous population of the North.

It thus becomes clear that in-migrants, as distinct from the indigenous population, do not feel that the problem is so acute. This may be one of the factors generating the elements of tension in the relations between the in-migrant and indigenous population of the Tyumen North.

Respondents were also asked to identify the main features bringing them close to the people of their nationality, i.e. the features actually defining the original character of one or the other nation. Residents of the Tyumen North (on the average, 1/4 of respondents in each respective group) named language as the principal means of communication between people. Second were named common views and interests (1/5 of respondents in each respective group). Further followed: traditional way of life, national customs, traditions, culture (literature, art, etc.), and common history. Features of appearance and religion were ranked the least significant among those

characteristics making a person one with the people of his nationality (up to 2 percent on the average).

All essential elements of the original character of a nation identified by the respondents are the components of culture understood in the broad sense of the word, being formed on the basis of specific ethnic features, the way of life of a nation, its material and spiritual activity. Culture is a paramount factor in uniting people, the ethnic culture of the indigenous peoples of the North in particular, characterized by stable features and even able to shape common psychology.

The relation of the various nationalities of the North to each other's culture may be judged upon by their recognition of the need to know the culture of the nation within which they live. Such a need is recognized, on the average, by 3/5 of indigenous and 2/5 of in-migrant respondents. The above statement found most active support among the indigenous residents of the Yamalo-Nenetskii okrug (eight of ten people). As compared with the in-migrants supporting

the same idea, their number in the okrug is 1.8 times greater.

«Knowledge of one's own national culture should take priority over other cultures» - the point of view was shared, on the average, by almost half of the immigrants and 1/3 of the indigenous respondents.

The distribution of answers to the above question shows that almost half of the people coming to the Tyumen North from other regions of Russia are not oriented to learning about the culture of indigenous peoples of the North, while over half of the indigenous respondents believe that this is necessary.

The attitude of the indigenous residents and immigrants to the necessity of learning the culture of the people among which they live is comparable with the real knowledge of respondents of the concrete elements of culture of the indigenous people of the North: history, traditions, customs, rites, religion, literature, folklore, music, songs, dances, pictorial art.

It became clear that the self-estimate by respondents of cultural knowledge of the peoples of

the North is quite low. It is significant that this is characteristic, though in a lesser degree, of both the in-migrant and the indigenous population. On the average, 1/3 of in-migrants have no idea of the history, traditions, customs, rites, literature, folklore, pictorial art; 1/4 of the musical culture; and more than a half, of the religion of the native population. What particularly concerns the indigenous population, 2/5 of the respondents have no idea of the religion; about 1/3, of the pictorial art; 17 percent of the literature and folklore; 13 percent, of the traditions, customs and rites; 12 percent, of the music, songs and dances; and 11 percent, of the history.

In general, respondents in both groups give estimates of their knowledge of the culture of the North as «not well acquainted», which means in some general features, fragmentarily, or superficially. Some differences have been nevertheless noted. For example, 1/3 of the representatives of indigenous population in the Yamalo-Nenetskii okrug are well acquainted with the history; 2/3, with the traditions,

customs and rites; 2/5 of the indigenous respondents are well acquainted with the musical culture of the peoples of the North.

At the 6th Congress of the Peoples' Deputies of the Russian Federation in April 1992 a special discussion was dedicated to the social-economic situation in the regions of the North. Proposals were made with regard to the cultural policy in the region aimed at maintaining and developing the original national cultures of the peoples of the North. They suggested increasing of the number of papers, magazines, broadcasts and television programs in all languages of the peoples of the Russian North, creation of national cultural centers, national communities and associations, abandoning the practices of placement of children in boarding-schools, and change to setting up, where necessary, of small community schools.

These proposals found support with 74 to 83 percent of indigenous respondents, and 54 to 70 percent of in-migrants. As can be seen, in-migrants

feel more uncertain with regard to expediency of their implementation.

The most ample support was given by residents of the North to the idea of discontinuing the practices of boarding schools and setting up small community schools (62 and 51 percent in respective groups). On this issue, the Yamalo-Nenetskii okrug population feels the strongest.

5. CONCLUSIONS.

The modern crisis in the demographic and social-cultural consequences of the development of the Siberian oil-and-gas complex may be considered as the outcome of an aggregate influence of a number of factors which can be divided into two groups.

In the first group, we may consider the vices and shortcomings immanently inherent in the economic system of socialism, as well as the definite technological lag of Russia behind developed countries. From this standpoint, the present crisis in oil extraction had been predicted as inevitable by many Western scholars.

The second group of causes for the severe crisis in the socio-cultural sphere of the region had been regarded previously as one of minor importance. Intensification of flagrant social pressures, have caused not only a mere disharmony but near destruction of economic, demographic, social, cultural, ethnic, ecological and political processes which have brought about an unprecedented decrease in the region's

population either from the results of economic activity or from spiritual, historical, and folk-traditional sources of vital cultural activity of the region's community. These factors contribute to a most acute crisis situation in the Tyumen province and without any exaggeration make the situation explosive.

Demographical consequences of rapid industrial development in the Tyumen North are considered to be one of the most vivid examples of this impact. Not repeating all the statements made above, it is necessary to conclude this analysis of demographic issues in the Tyumen North by emphasizing the following.

One: the development of the birth-rate, death-rate, marriage-rate and family formation in the region follow the model of demographic transition. Birth-rate had increased to the level of a simple and then to a narrow replacement of generations. Life expectancy increased, family size had decreased, loneliness and the occurrence of uncompleted families were increasing, divorce-rate was increasing, the

population became more mobile, and the rate of settling in the towns intensified.

Two: there was a tendency toward ethnic-cultural differences in demographic transition. Hence a contradiction is seen between the norms of the migrated Russian-speaking population, Slav in its majority, and the demographic changes of the indigenous less numerous northern peoples. The first fairly large group of people was at the final phases of demographic transition, and the second decreasing group was at the initial phases of demographic transition. Many mixed marriages have occurred between migrants and the northern indigenous population. The ethnic factor remains the basic one even in comparison with the socio-economic situation in northern life. All this is proved by the data of demographic statistics and sociology.

Recent migrants are characterized by an urban small-family way of life with European standards of marriage and modern causes of death, the average length of life is reaching 70. Indigenous population is characterised by the transition from large- to

medium-family culture of life and a decreased length of life in the isolated small populations.

Three: the growth of the population of the Tyumen North is of an uncompleted, hindered character due to natural-climatic, ecological, socio-economic conditions and the influence of migration. A high rate of infectious diseases contributes to demographic backwardness of the region. This causes by a high death-rate of pregnant women and infants under one year old, considerable frequency of abortions, poisoning, traumas, congenital deformities, and archaic system of contraception. Incompleteness of demographic transition leads to great economic, moral and demographic losses.

Under the impact of migrational pressure, socio-psychological and ecological tension, and the high rate of criminality, the remarkably high death-rate from murders and suicides does not conform to the laws of demographic transition. Death-rate continues to play an inadmissibly large role in regulation of the size of the northern population.

Four: reproduction of the population in the Tyumen North for many years has been affected by migration processes. Despite a considerable labor pool built up within a short period of time the influence of migration was mainly of a destructive nature. This is shown by large numbers of males in all age groups, high human impacts on the northern area, unfavorable death-rate and disease-rate including nervous and mental disorders, involvement of the population in alcoholism, with large families being especially affected. The transition of large-family populations to medium- and small-family categories was stimulated by the migrational process, although this fact as well as the increasing spreading of mixed marriages should not be treated as a positive result of «internationalization» of public life. The tendency toward small families and the conditions of high death-rate could become fatal for the population as there will no longer be normal replacement of the generations.

Powerful migration pressure promoted such a rapid increase of population in the Russia's North in the

1960s-1980s, that the normal formation of social-everyday infrastructure, and a network of support services was impossible and was replaced in practice by half-measures for everyday life and recreation, including temporary housing. This affected the population's social health, moreover, in view of the fact that the government-imposed migrations were deportations and exiles, establishment of a dense network of corrective labor camps and other punitive establishments in the North, which favored the assemblage of a specific type of a northern individual often with a criminal past, neglecting his own health, and inclined to narcotics and alcohol. It is very difficult to influence on any changes in self-preserving behavior of such a type of a personality. The accumulation of a population with marginal properties in the North caused an obvious destructive forms of demographic behavior.

Five: loaded with the problems of incompleteness of demographic transition, the Tyumen North has entered a period of deep demographic catastrophes, that have embraced the whole territory of the Russian

Federation. Since the beginning of the 1990s there has been rapid depopulation in the North. In 1989-1990 the situation could be treated as a pre-crisis one and the demographic slump could be entirely (or by two thirds) explained by an unfavorable balance of sexual and age shifts in the most fertile female groups. From 1991 on, however, the delay of child-bearing in families caused a sharp decrease of birth-rate.

Statistical models show a parallel reduction in the estimates of life expectancy. The slump of birth-rate was now seen to be caused by the rise in social tension and worsening of the population's living standards, not by the shifts in the age structure as previously thought. According to different estimations, from one third to two thirds of the families delay their child-bearing or choose to have fewer children.

Further growth of these tendencies could have catastrophic consequences for the Tyumen North, with an incomplete demographic transition in respect of death-rate and the mass out-migration of the most able-bodied part of the migrated population, with

their families, into other regions. Certainly, the crisis could have been avoided with a stable public growth and a well thought out demographic policy. Unfortunately, there is no single demographic policy towards both the Tyumen province and the whole Russian Federation. It has been substituted by isolated, weakly connected measures on social aid to the family, children, aged persons and invalids. Such an approach is not adequate to the goal of proper regulation of productive and migration processes.

It is no exaggeration to say that it was the initial orientation toward creation of a new but permanent population, the politics of «development through settlement,» that proved to be one of the main causes of the deep crisis which has affected the region. Here we come up with not only the negative impact of oil-and-gas development on demographic and social processes in the region, but the reverse: the impact on economic production of the emergence of a large, heterogeneous, unstable population.

My point is that the formation of a new demographic and social potential in the region, taken

together with all its problems, accompanied by the inability to create a favorable social environment, mismanagement of manpower resources and an inadequate socio-cultural infrastructure, have become the leading causes of production failures in the oil and gas industry. Logical planning for the economy and society should be considered for the future of oil-and-gas development as well as for implementation of urgent measures to solve numerous demographic and social issues which have been on the rise in the Tyumen North since the late 1980s.

It seems further apparent that in the not-too-distant future Russia, while changing its economic and political system, has enough power to handle a wide spectrum of technical issues by adapting western technologies and principles of management. This would eliminate, or at least mitigate the crisis in oil and gas production. Nevertheless, the accumulated load of socio-cultural issues has a distinct impact on production and on all components of regional development. These issues cannot be solved instantly by means of any immediate practical action.

One should be aware that the destructive potential of the human influx, which took shape in the Tyumen North due to massive migration of manpower, is very great. It is obvious that these people have lost property, power, family, nature, culture, health, morals and civilized forms of politics. Aggressive threats and actions have become almost the norm for the people of the region.

Future strategies for the Tyumen region require a cardinal change in the perception of positive experiences of regional governing and development accumulated in other countries. The USSR priority in the development of the North, having been firmly grounded in huge expenditures of material and people resources, had begun to be devaluated when new effective models of northern economic development were realized in the USA, Canada and in a number of Scandinavian countries. This foreign experience has not yet been applied in Russia. Until recently, ideological imperatives and differences in economic and political systems were insurmountable obstacles to such applications. Russia's move toward a market

economy and political democracy offers a real opportunity to make use of the best patterns of foreign methodology and the experience of regional planning. Optimization of strategies and tactics for the development of the Russian North becomes a possibility.

This possibility is based on the fact that development of the North is a global geopolitical problem. Both Russia and the market economies require its solution. This realization inevitably leads to the fact that the Tyumen province is integrated into world Arctic geopolitics, and its balanced development serves the interests of all of the countries possessing Arctic land and water territories.

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